iDashboards User's Manual

Version 8.0

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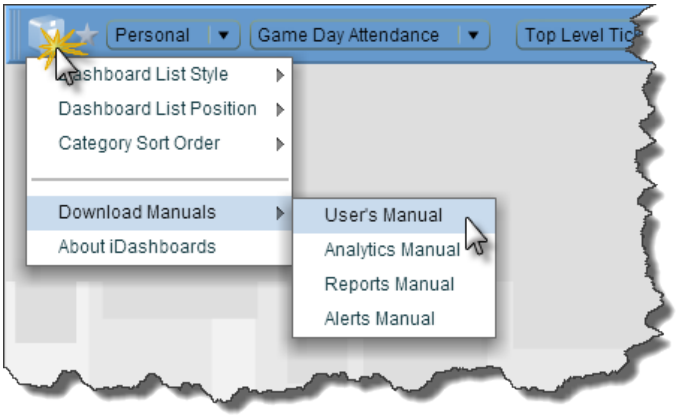
1. Introduction



1.1 System requirements for accessing iDashboards

- Network/Internet connection
- Browser with Adobe Flash plug-in, Version 11.1.0.0 or higher.

1.2 Log-in Requirements

Access to iDashboards requires a username and password. Users will be prompted with the iDashboards login prompt when they open the application. A user may change her/his password after logging-in, but not the username. Every user that is created in iDashboards must be assigned to one, and only one, User Role. There are four User Roles, as follows:

- Viewer— Users assigned to this role have limited right-click menu and Application Menu options. Therefore, they are unable to create new charts or dashboards and they cannot modify existing charts or dashboards. They can, however, fully interact with charts and dashboards. They do not have (or need) a “Personal” category.
- Business User — Users assigned to this role have full right-click menu and Application Menu capability. Therefore, they can create new charts and dashboards and can make changes to existing charts and dashboards. However, they can only create charts that are based on static data; that is, data entered by hand or via a one-time import of a spreadsheet. They cannot create charts that point to live data sources. Also, they cannot modify any data related settings of existing charts, only the visual settings. They have a “Personal” category.
- Analyst — Users assigned this role have all the permissions of the Business User role, but also have the ability to create charts based on live data sources and can edit data related settings of existing charts.
- Admin — Users assigned this role have all the permissions of the Analyst role and are the only users that can log into the Administrator Application and perform administrative functions.

1.3 iDashboards Framework

After a successful log-in, the iDashboards framework loads into the web-browser. The figure below illustrates the key elements of the iDashboards framework (see Figure 1-1).

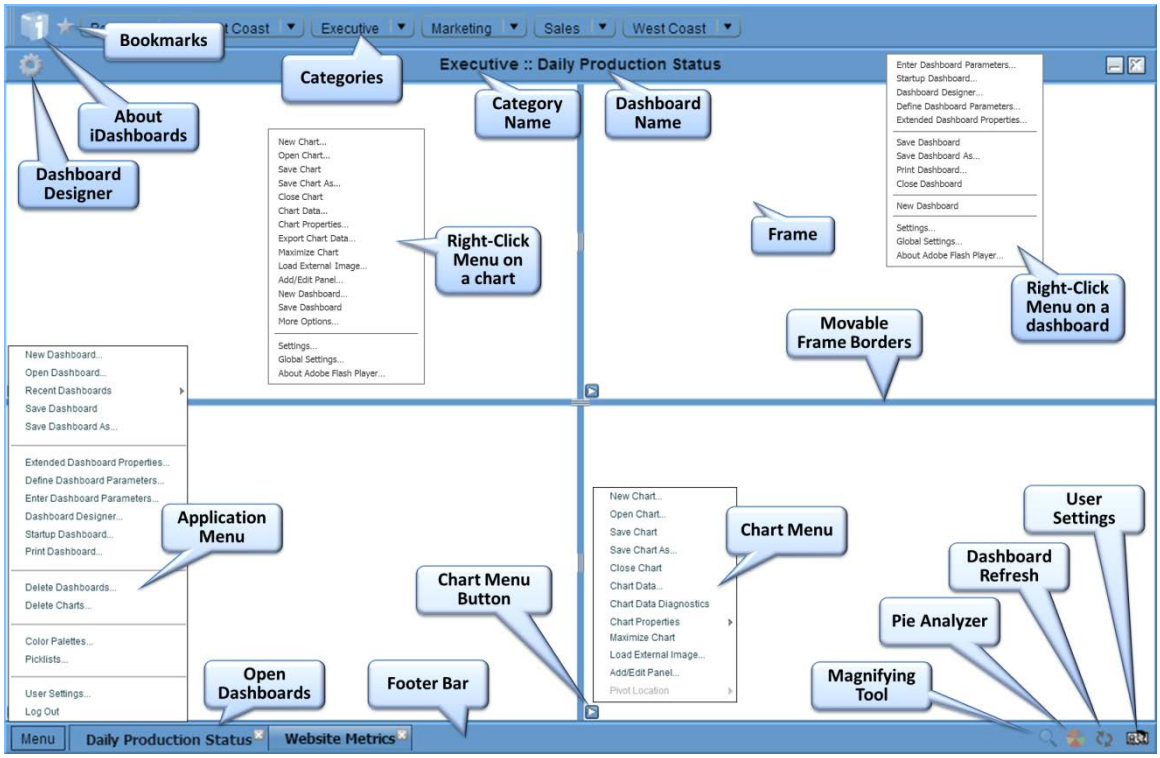


Figure 1-1

1.3.1 Menus

In addition to the Application Menu accessed via the "Menu" button, there are context-sensitive "right-click" menus available to the user. These menus can be opened by right-clicking the mouse on various elements in the iDashboards application. Depending on what you right-click on, what your User Role is and the administrative switches that have been turned on, each menu will contain different items. Note that many items can be accessed via more than one menu.

Examples of menus a User Role of Business User might see are as follows. Figure 1-2 shows a menu by right-clicking on a dashboard title bar, Figure 1-3 shows the right click menu on the Application (where Categories are visible), Figure 1-4 shows a menu by right-clicking on a chart, Figure 1-5 shows a Chart Menu. The Analyst and Admin roles will see the same menus as the Business User role, but will have more permission within various menu items.

Examples of menus a User Role of Viewer might see are as follows. Figure 1-6 shows a menu by right-clicking on a dashboard title bar, Figure 1-7 shows a menu by right-clicking on a chart, Figure 1-8 shows the Application Menu, Figure 1-9 shows a Chart Menu.

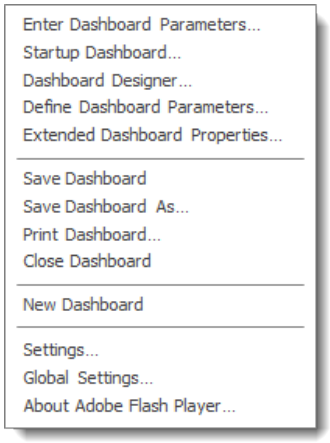


Figure 1-2

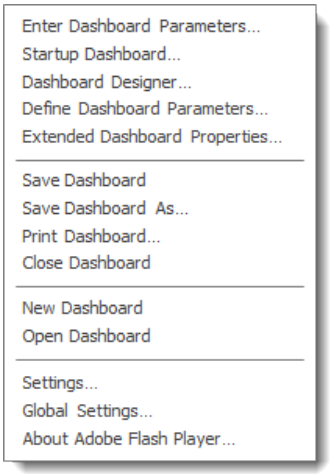


Figure 1-3

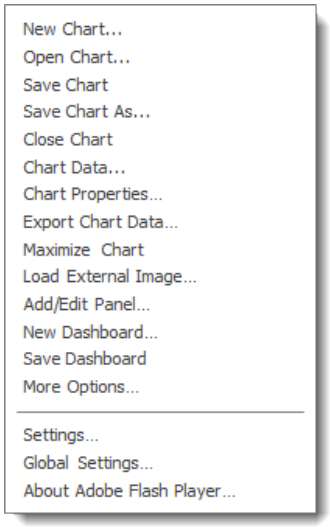


Figure 1-4

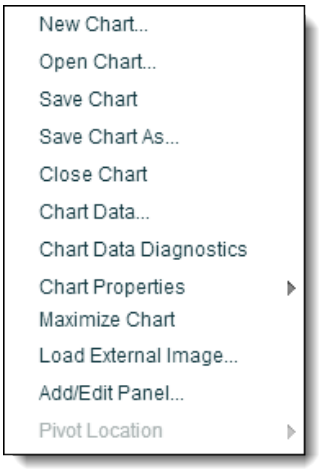


Figure 1-5

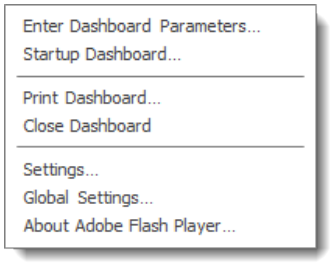


Figure 1-6

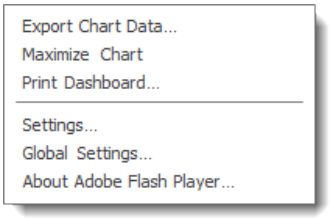


Figure 1-7

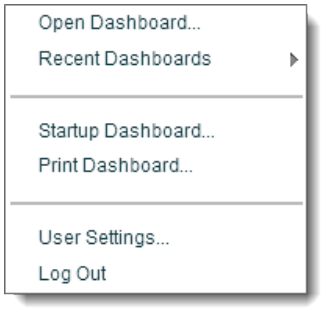


Figure 1-8

Figure 1-9

Note: *Many times throughout this manual, you are asked to right-click and choose an option from the resulting menu. You are not instructed where to right-click; hence you may pull up a context-sensitive menu that doesn't have the option you are looking for; if this is the case, right-click elsewhere on the screen to open the desired menu.*

1.4 Magnifying Tool

The magnification feature lets a user zoom in on a portion of the overall dashboard. To begin, click on the magnifying glass icon in the lower right of the iDashboards application . The zoom level will begin at 100% and can be increased up to 1000%. There is no option for a zoom level less than 100% since the user can decrease the size of their browser window. After clicking the magnification icon, two items will appear on the screen. The first will be centered on the screen, and display the current zoom level. The dashboard will also display the magnification controls at the bottom of the screen in the center (see Figure 1-10). While the dashboard is in this mode, all charts remain fully interactive.

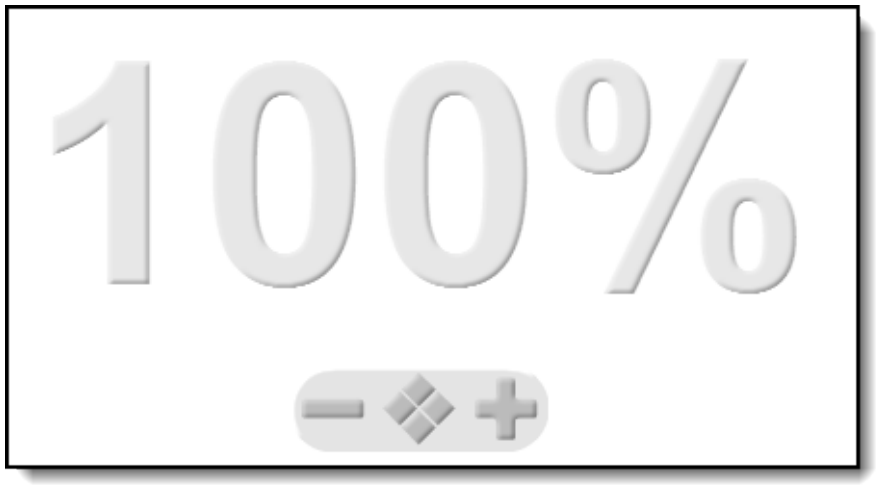


Figure 1-10

1.4.1 Zoom options

Zooming and panning is available through the use of mouse, keyboard-mouse, or just keyboard inputs. First click the magnifying glass to begin, and then use one of the options below.

Mouse – This uses the magnification controls near the bottom of the screen. The Plus and Minus will control the zoom level and the diamond (comprised of four smaller diamonds) are used to pan up, down, left or right.

Keyboard plus Mouse – Once the zoom level is higher than 100%, you can hold down the CTRL key on the keyboard and use the mouse to pan (click-n-drag the screen)

Keyboard – Use the "+" and "-" keys to zoom in and out. Use the ↑, ↓, ←, → keys to pan up, down, left or right. Also try holding down the SHIFT key while using the arrows to pan

full-up, full-down, full-left, and full-right. Other keys like “Page Up” and “Page Dn” will help navigate the screen.

In Figure 1-11, a before-and-after screen shot was taken to illustrate how a user can zoom in on visually small details.

Before **At 200%**

Figure 1-11

Once the magnifying tool is in use, the user can turn it off by clicking again on the magnification icon in the lower right of the iDashboards application .

1.5 Pie Analyzer

The pie analyzer allows a user to hover over a chart and, for the X-axis value hovered over, see the Y-axes relative percentages displayed in a 2D pie chart view (see Figure 1-12). This functionality is available in most charts in iDashboards, but not all. A chart will only display the pie analyzer if it has more than one, numeric Y-axis, and the ‘Show Mouse-over Value’ chart property turned on. The pie analyzer will replace the traditional mouse-over effect.

To turn the pie analyzer on, click on the pie icon in the lower right of the iDashboards application (the pie will be colored). To turn the pie analyzer off, click on the pie icon again (the pie will be grayed out).

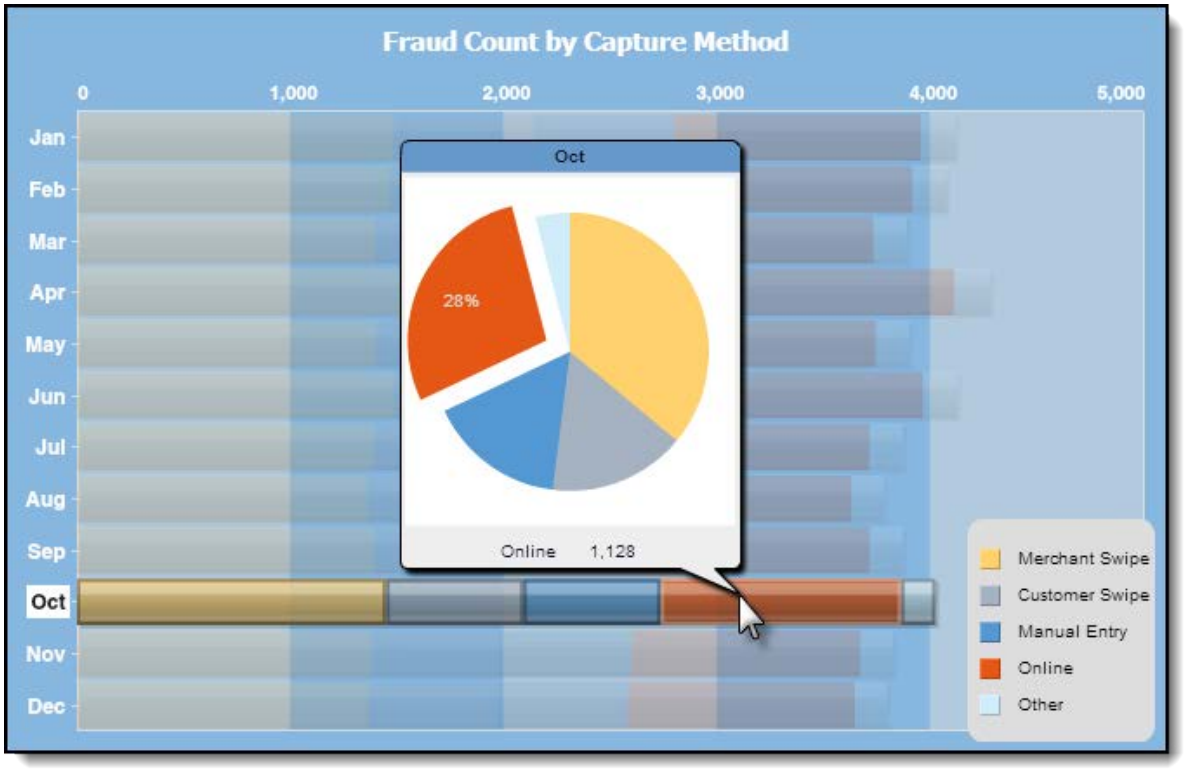


Figure 1-12

1.6 Maximizing and Printing

1.6.1 Maximize a Chart

A single chart within any given frame of the dashboard could be maximized in size to display on the full screen. To maximize, select the 'Maximize Chart' option from the Chart Menu or select the 'Maximize Chart' option from the right-click menu. Click on the 'Restore Chart' button on the top right corner of the screen to go back to the original chart size as it is displayed in the dashboard (see Figure 1-13).

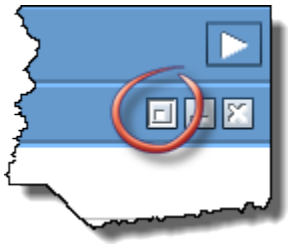


Figure 1-13

1.6.2 Printing Charts

To print a single chart, first maximize the chart. Then, click on the '*Print Dashboard…'* option within the Application Menu at the bottom left of the dashboard. Printing with landscape orientation is recommended.

Note: *This print functionality will only print the currently maximized chart.*

1.6.3 Printing Dashboards

To print the entire dashboard, click on the '*Print Dashboard…'* option within the Application Menu at the bottom left of the dashboard. Printing with landscape orientation is recommended.

Note: *Using the "Print Dashboard…" menu option within iDashboards will only print the charts within the current dashboard. Using the print functionality within the browser will print the browser screen including the Category and Menu bars.*

1.6.4 Copying a Dashboard Image to Other Applications

Sometimes, you may need to capture an image of a dashboard to paste within other applications such as Microsoft Word, Power Point, etc.

This may be achieved by using the Shift + Print Screen key combination. To also capture the highlighting effect of related points, you may keep your cursor on the dashboard at any specific point of interest. Leave the cursor there, and then simultaneously press Shift + Print Screen key combination on your keyboard.

Now you can go to any other application where you would like to paste this dashboard and paste the image by using the Ctrl + V key combination on your keyboard. Note that this will paste the entire screen shot. If you want to only capture the dashboard viewing area, use the Crop image editing feature within Word or the Paint application within the Windows – Accessories application.

Note: *The Shift + Print Screen and Ctrl + V key combinations are of Microsoft specific operating systems. Apple's Mac may have a different key combination for these operations.*

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2. User Settings

There are a number of settings a user can configure that pertain to the user experience and security of iDashboards. The icon in the bottom right corner of the iDashboards application (see Figure 2-1) opens the **User Settings** window (see Figure 2-2). Alternatively you can access the **User Settings** window from the Application Menu button on the lower left of the iDashboards application.

Figure 2-1

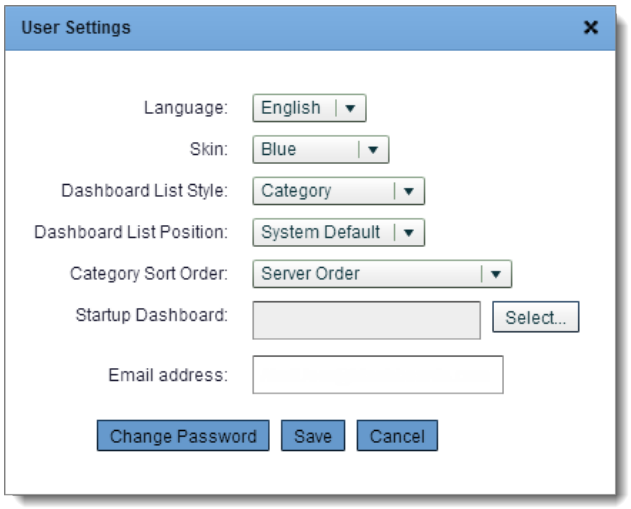

Figure 2-2

2.1 Login Notification

The iDashboards administrator has control over a special pop-up message that appears immediately after logging in. The message is intended to communicate server maintenance tasks, but may be used for other purposes. See your iDashboards administrator if there are questions regarding the notification (see Figure 2-3).

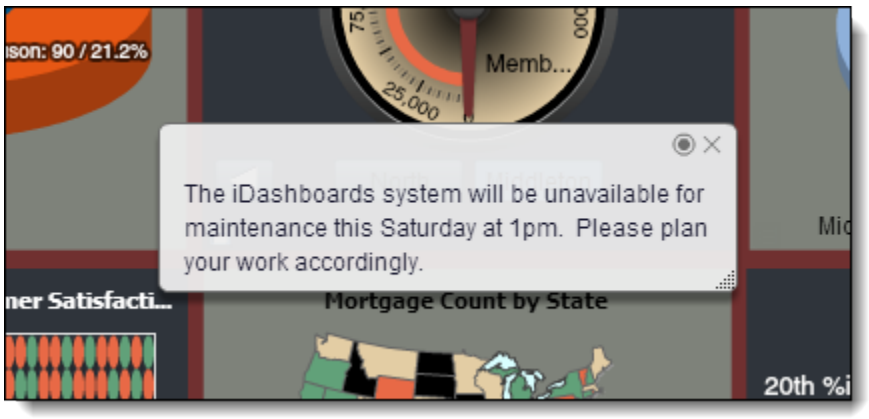
son: 90 / 21.2%
Memb...
25,000
The iDashboards system will be unavailable for maintenance this Saturday at 1pm. Please plan your work accordingly.
ner Satisfacti...
Mortgage Count by State
20th %i

Figure 2-3

2.2 Auto-Login

You may choose to save your username and password to log in automatically each time you open iDashboards. The username and password are stored in an encrypted cookie on your local computer.
To set your computer to auto log-in, click the **Log in automatically** checkbox on the **iDashboards Login** window and enter your username and password.

To disable auto-login after it has been set, choose ***User Settings*** from the Application Menu at the bottom of the iDashboards application. This will open a dialog box allowing you to uncheck the **Log in automatically** box. Alternatively, click on the user settings icon (see Figure 2-1) to disable this setting.

Note: *This should be done only on a PC or Laptop for your exclusive use to make sure that your access to iDashboards may not be used by anyone else.*

2.3 Changing your Password

Clicking the 'Change Password' button opens a window that allows you to enter your old password and a new password. If you forget your password, ask your iDashboards Administrator to assign you a new temporary password that you may change after you log-in.

Note*: You cannot change your iDashboards username through this window.*

2.4 Opening Dashboards (user-specific)

How to open dashboards is explained in Chapter 4, "Opening Dashboards". However, there are user-specific options in regard to opening a dashboard. The options below are accessible regardless of the computer used to access iDashboards.

2.4.1 Saving a Startup Dashboard

A Startup dashboard is the same concept as a Home Page within a web browser. As soon as you launch iDashboards, the Startup dashboard will automatically load within the dashboard viewing area. Only one dashboard can be set as the Startup dashboard.

To set a dashboard as your Startup dashboard, choose the ***Startup Dashboard*** option from the Application Menu at the bottom of the iDashboards user application. Alternatively, the User Settings icon also provides access to the Startup window. This will open a dialog box allowing you to choose the Startup dashboard from the categories you have privilege to access (see Figure 2-4). Use the window to navigate to the desired Startup dashboard, and then choose the dashboard to be automatically loaded when you log in. Click the OK button to set the Startup Dashboard.

If you currently have a dashboard open, an additional button appears when choosing the *Startup Dashboard* option from the Application Menu. With a dashboard already open, choose the ***Use Current*** button from the ***Select a Startup Dashboard*** dialog box (see Figure 2-5). This will make the currently displayed open dashboard your Startup dashboard.

If you already have a Startup dashboard chosen, the dashboard name will be displayed towards the bottom of the dialog box when viewing the Startup Dashboard information box. If you would like to clear a chosen Startup dashboard simply click on the Clear button. The next time you launch iDashboards will not automatically appear.

***Note**: The Startup Dashboard option is available to all named users regardless of their designated user roles.*

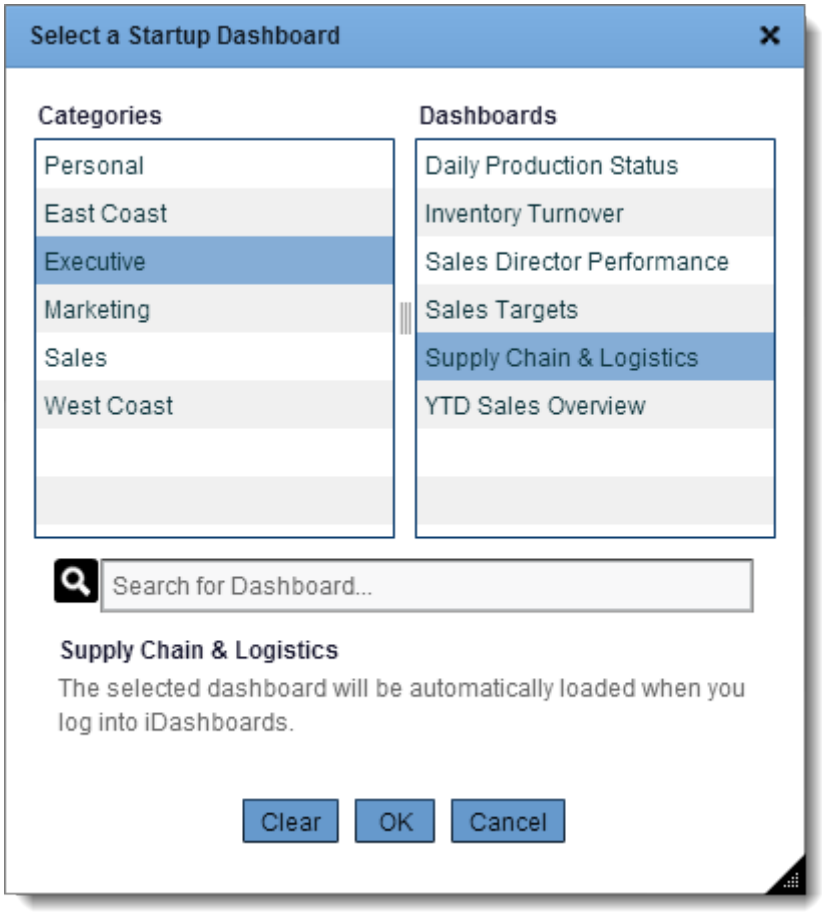

Figure 2-4

Figure 2-5

2.4.2 Bookmarks

Instead of memorizing each dashboard and the location where dashboards are saved, users can easily manage a custom list of dashboards they plan to revisit.

- **Create** – To create a bookmark for a dashboard that is already opened, click the star icon in the application bar, and then select 'Add Bookmark' (see Figure 2-6). The star will appear with a yellow tint whenever the current dashboard also exists as a bookmarked dashboard.

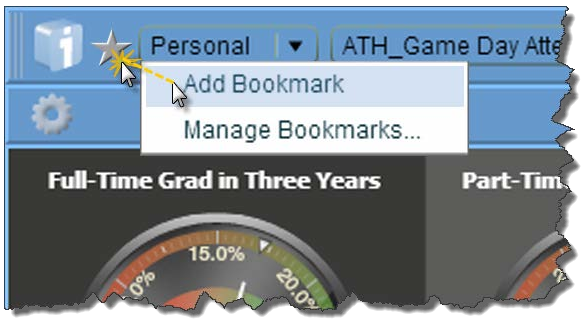

Figure 2-6

- **Manage** – To manage bookmarks, click the star icon in the application bar, and then select 'Manage Bookmarks…' A window will appear, allowing the user to Delete or Sort bookmarks.
- **Use** – To open a dashboard which has already been added as a bookmark, click the star icon in the application bar, and then select the dashboard. The category name will precede the dashboard name in the list even if category names have been hidden in the dashboard properties.

2.4.3 Recently Opened Dashboards

From the context menu any user can select the option 'Recent Dashboards'. The 10 most recently opened dashboards will appear as a list, displaying the category and dashboard name. Click on an item in the list to reopen a dashboard. This list is connected to each specific user, and is automatically managed on the server. Users can access their recent dashboard list regardless of the computer used to access iDashboards.

2.5 Changing Language

You may choose which language iDashboards uses for menus within the dashboard framework. To change your language preference, select the desired language in the 'Language' dropdown box of the **User Settings** window.

Language packs affect the text that is built in to the iDashboards User Application. For example, the language packs affect the menu items, the right click menu options, and the windows related to dashboard and chart creation. Language packs will not affect any text that is pulled from a Data Source as it comes directly from the data source. Also category names are displayed as they are typed by an iDashboards administrator. The iDashboards manuals are written in US English.

Note: *Contact iDashboards for availability of Language Packs.*

2.6 Changing Skin

You may choose which skin (i.e. color) iDashboards uses for the border of the dashboard framework. To change your skin preference, select the desired skin in the 'Skin' color menu from the **User Settings** window.

2.7 Dashboard List Style

Within iDashboards, dashboards are stored in folder-like containers called Categories (explained in Chapter 3, "iDashboards Categories")

Unopened dashboards can be displayed in two different ways. Users have the ability to select which method they prefer. Click on the iDashboards icon and select the option "Dashboard List Style". The displayed options are Category (default) and Dashboard (see Figure 2-7). Users should be aware that the iDashboards administrator can change the default dashboard list style option and has also the ability to restrict users from using this option.

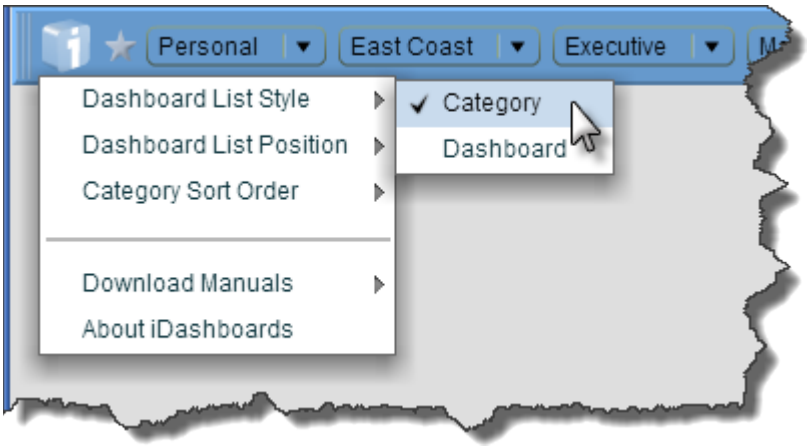

Figure 2-7

2.7.1 System Default

As with other system properties, the value of the 'System Default' dashboard display style is supplied when the User application is initially loaded, not when the user logs in. This means that if the default setting is changed in the Admin application, the changes will not be visible in the User application until it is reloaded.

2.7.2 Category

A dropdown list appears across the top of the User application screen for each category to which the user has access, and each dropdown contains the list of dashboards that are available in that category (see Figure 2-8). This is the default style for iDashboards.

Figure 2-8

2.7.3 Dashboard

If this list style is selected, each available dashboard is listed individually across the top of the User application screen, with the dashboards in the user's Personal category appearing first, followed by the categories (see Figure 2-9). The sort order of the categories can be set by the user separately (see Section 3.3 Category Sort Order).

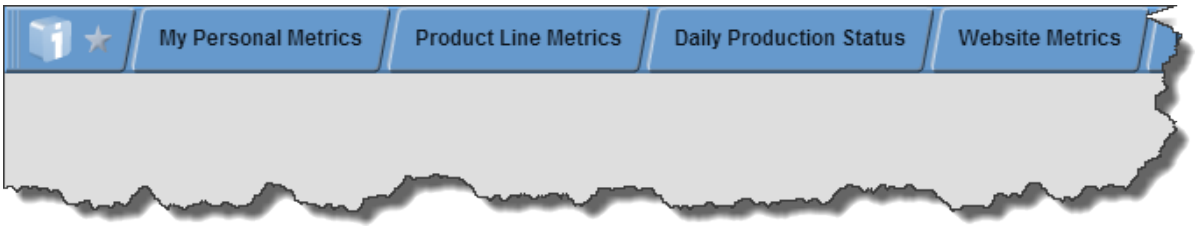

Figure 2-9

2.8 Dashboard List Position

Users have the ability here to select in which position the dashboard list should be displayed within the User application window. Click on the iDashboards icon (see Figure 2-10 and Figure 2-11) and select the option "Dashboard List Position". The displayed options are Top (default), Left and Right. The bottom is not an option for placement since the dashboard tabs are at the bottom of the application.

Users should be aware that the iDashboards administrator can change the default dashboard list position and has also the ability to restrict users from using this option.

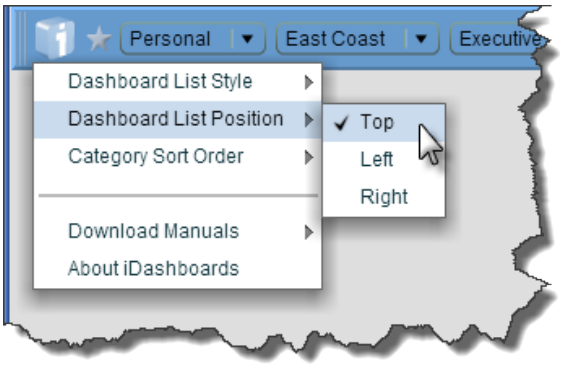

Figure 2-10

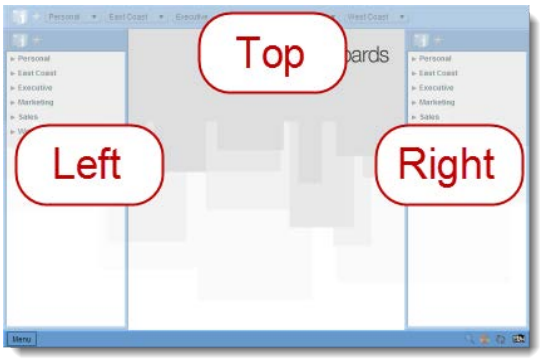

Figure 2-11

The users are also able to drag the dashboard list to the left or to the right side of the User application window. When pointing the cursor to the left of the iDashboards icon a help text appears (see Figure 2-12). At this point it is possible to drag the dashboard list to the desired position.

Figure 2-12

Other options for adjusting the dashboard list style, list position or category sort order are accessible using the User Settings window (see Figure 2-13)

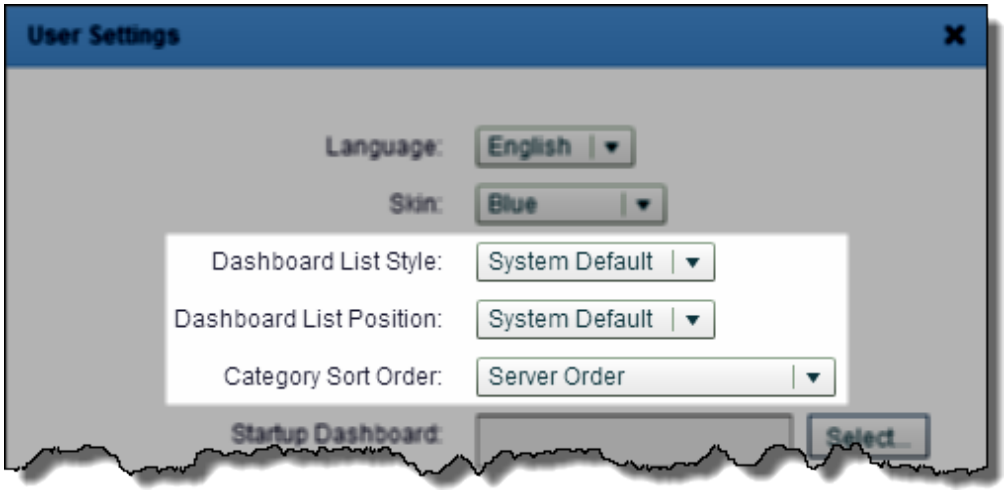

Figure 2-13

2.9 Logging Out of iDashboards

To log out of iDashboards, click the 'Log Out' button on the **User Settings** window. A confirmation window will confirm you are logging out.

You may also log out by clicking on the Application Menu button at the lower left of the iDashboards application and selecting the 'Log Out' option. This will log the user off without a confirmation.

Lastly, pressing "F5" on the keyboard (or clicking the refresh icon in the browser) will log the user off without a confirmation. If Auto Log-in is enabled, the user will then automatically be logged back into iDashboards.

3. iDashboards Categories

After a successful log in, iDashboards displays several dropdowns on the header bar area. Each dropdown is a Category. Categories are grouped entities which can contain one or more dashboards. Similar to how file folders organize documents within the Windows environment; Categories help organize dashboards within the iDashboards framework. Additional Categories are often custom defined by the iDashboards Administrator.

A user will automatically see any additional Categories for which s/he has been granted access, but only if Categories have been created (by the administrator) and dashboards have been created and saved within the categories. If the user clicks on any Category, s/he will see a list of available dashboards (see Figure 3-1).

Figure 3-1

Note: *Categories and dashboards can be viewed using different display options (see Section 2.7, "Dashboard List Style" for details).*

Note: *Categories will not display within the User Application unless a dashboard exists within the category. This includes a user's 'Personal Category'*

3.1 Personal Category

The first Category is always "Personal". As the name implies, the Personal Category is a personalized category for each user account except for users with a User Role of Viewer, and no other users can see its content. As a user you can create and save dashboards and charts within your Personal Category. For details on creating dashboards and charts, refer to Chapter 5, "Designing Dashboards", Chapter 6, "Creating Charts: Static Data", and Chapter 7, "Creating Charts: Dynamic Data" within this guide.

3.2 Additional Categories

If the number of Categories assigned to a user is greater than what would fit on the width of the header bar, the user may retrieve further Categories by clicking on the right arrow scroll button that appears on the right hand side of the header bar (see Figure 3-2). The user will only see the scroll button if there are more categories available. If the user scrolls to the right using the right arrow, an additional left arrow appears. By using the left and right arrows, the user may scroll back and forth to view all available Categories. Hitting CTRL and clicking on an arrow will scroll one page. Hitting SHIFT and clicking on an arrow will scroll to the end.

Figure 3-2

Using CTRL+ click will scroll by page

Using SHIFT + click will jump to beginning/end

3.3 Category Sort Order

With the category sort order selection the users can determine how the displayed categories should be sorted. Double click on the iDashboards icon and select the option "Category Sort Order". The displayed options are Server Order (default); Alphabetical – Ascending or Descending (see Figure 3-3).

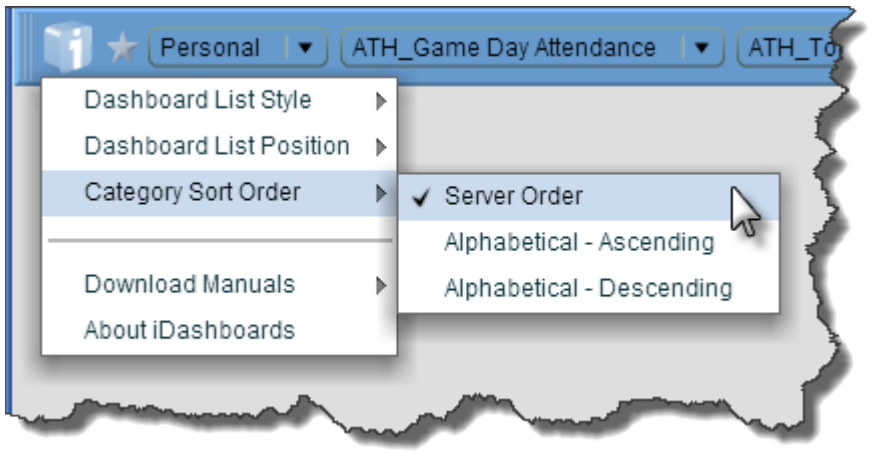

Figure 3-3

The Server Order is set by the iDashboards administrator and is the default setting. The iDashboards Administrator can also determine the sort order of the dashboards within the categories.

The users are able to override the Server Order of the categories by selecting either "Alphabetical – Ascending" or "Alphabetical – Descending".

3.4 Dashboard Sort Order

Sorting dashboards can only be performed from the Administrator Application, by users with the Admin role. See the Administrator's Manual for more information.

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4. Opening Dashboards

There are many options for opening a dashboard, and some visual differenced based on specific settings. Refer to sections 2.7, “Dashboard List Style” and 2.8, “Dashboard List Position” for information on changing these settings. This manual covers the List Position when at the top, but the same concepts are used when the position is Left or Right.

4.1 Open Dashboard: Category Style

The user can click on the Category name to show all the dashboards available within that Category (see Figure 4-1). Clicking on the dashboard will open the dashboard in the viewing area.

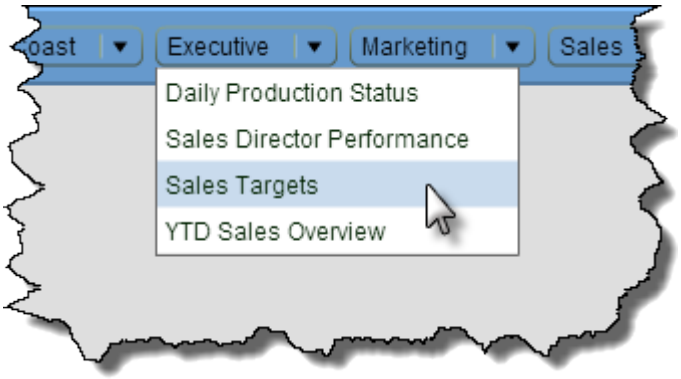


Figure 4-1

4.2 Open Dashboard: Dashboard Style

The user can click on the Dashboard name one time (see Figure 4-2)

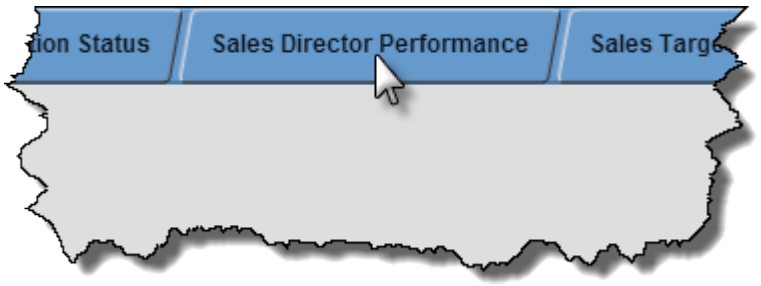


Figure 4-2

4.3 Open Dashboard Window

There are two options for launching the “Open Dashboard” window:

- Right-Click in the Category Header and select “Open Dashboard…”
- Click on the Application Menu button located at the bottom left of the iDashboards framework and select “Open Dashboard…”

The window that appears can be visually navigated by selecting the category name on the left, then the dashboard name on the right. Or, the user can use a live word search to locate the dashboard name (see Figure 4-3).

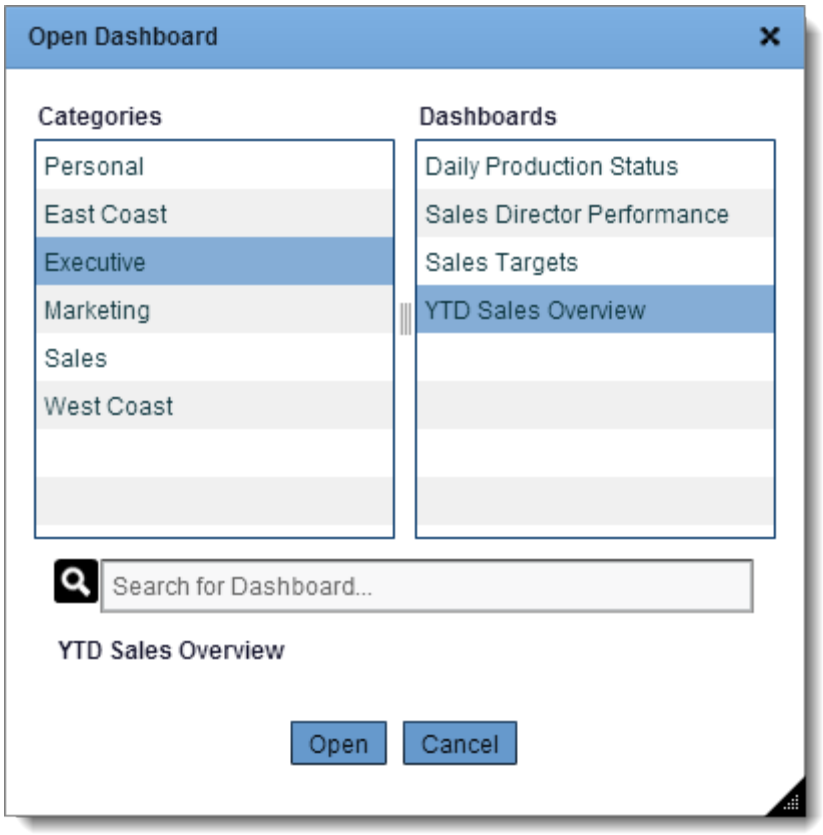


Figure 4-3

4.4 Dashboard Launcher

Another option for opening dashboards can be found in section 15.6 Dashboard Launcher. This option allows for a dashboard frame to host a list of dashboards.

5. Designing Dashboards

A user has two areas where visual editing occurs when designing a dashboard. The first area is the User Application, which offers all the options for editing and creating charts. The second area is the Dashboard Designer, which offers all the options for creating and editing dashboard frames, dashboard images, dashboard text, dashboard panels, and chart placement, etc. Both areas are discussed within this chapter.

5.1 Design Permissions

Your ability to create or edit an existing dashboard depends upon the user role and access rights provided to your iDashboards account by the iDashboards Administrator. Such access rights are provided at the Category level, and all dashboards and charts within any given Category inherit those access rights.

There are three types of access rights:

- Save
- View only
- No Access

Therefore, depending upon the access rights assigned to you, you *may* or *may not* have the rights to make changes and save those changes to an existing dashboard. However, you can always make changes to an existing dashboard and save those changes as a different dashboard within your Personal Category or any other Category to which you may have Save permissions.

5.2 Create the Dashboard

To create a new dashboard, click on the Application Menu button at the bottom left of your screen and click the ‘New Dashboard…’ option. Alternatively, you can create a new dashboard via the right-click menu.

5.2.1 Choosing the Dashboard Layout

Choose the layout of the dashboard by highlighting one of the available layouts and clicking the “Create” button (see Figure 5-1). Alternatively, you can choose the Custom layout and design the layout yourself. For a custom dashboard layout, see Section 5.3 Dashboard Designer and section 5.4.2 Frames: Add or Remove.

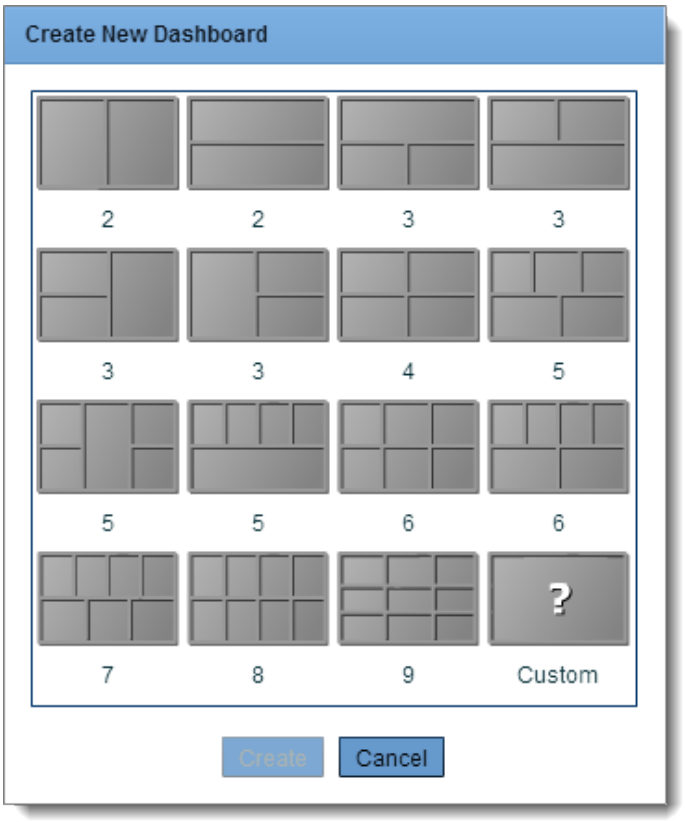


Figure 5-1

Immediately after clicking 'Create', you will be taken to the Dashboard Designer (see 5.3 Dashboard Designer).

5.3 Dashboard Designer

A user has two areas where visual editing occurs when designing a dashboard. The first area is the User Application, which offers all the options for editing and creating charts. The second area is the Dashboard Designer, which offers all the options for creating and editing dashboard frames, dashboard images, dashboard text, dashboard panels, and chart placement, etc.

5.3.1 Dashboard Designer with New Dashboard

When a user creates a new dashboard; they will be automatically taken to the Dashboard Designer.

5.3.2 Dashboard Designer to Edit Dashboard

When a dashboard needs to be edited, left-click on the cog (or gear) near the upper-left corner of the application (see Figure 5-2) and select 'Dashboard Designer'. This will enable an application with many dashboard properties. Alternatively, click the Application Menu button at the lower left of the screen and select 'Dashboard Designer'.

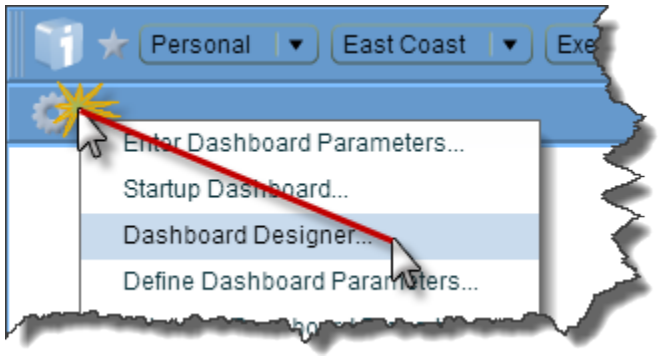
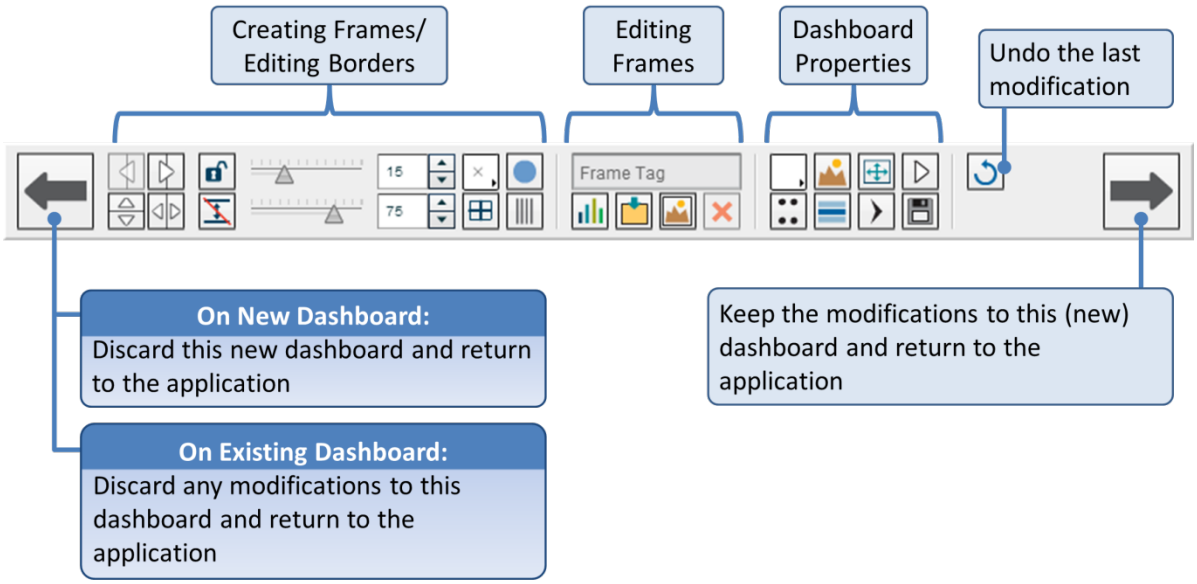


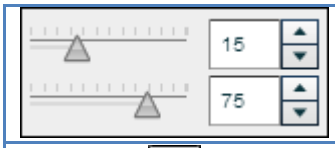
Figure 5-2

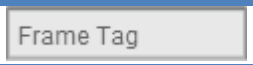
5.3.3 Icon Overview

The Dashboard Designer a graphical interface comprised of icons and fields. Each component has a mouse-over description. Below is an overview of the Designer and the functional sections within.


Creating Frames/ Editing Borders
Editing Frames
Dashboard Properties
Undo the last modification
Frame Tag
On New Dashboard:
Discard this new dashboard and return to the application
On Existing Dashboard:
Discard any modifications to this dashboard and return to the application
Keep the modifications to this (new) dashboard and return to the application

Creating Frames/Editing Borders	
	Split frames borders
	Merge frames borders
or	Enable or Disable auto-space frame borders when splitting frames
or	Lock or Unlock frame borders (Takes effect when changes are saved)

	Frame border thickness Frame border transparency
	Frame border color
or	Show or Hide frame borders
or	Use or Don't-use default frame border color, which is determined by the user's currently selected skin
or	Show or Hide frame border handles

Editing Frames	
	Set the frame tag for the selected frame
	Place existing charts into frames
	Place a panel into the selected frame
	Display an image from a URL in the selected frame
	Clear the contents of the selected frame

Dashboard Properties	
	Set the background color for this dashboard
or	Show or Hide the dashboard category name in the titlebar (takes effect when changes are saved)
	Set a background image for this dashboard
or	Enable or Disable synchronized highlighting in this dashboard (takes effect when changes are saved)
or	Fit or Don't-fit the background image to the outer dashboard frame
or	Enable or Disable pivot synchronization in this dashboard (takes effect when changes are saved)
or	Show or hide the chart menu buttons
	Save this dashboard to the repository in its current state (this operation cannot be undone, and any current undo history will be discarded)

5.3.4 Frame Highlighting Concept

Many tasks are now available regarding the dashboard layout. Left-click within a frame to begin any of the 'Editing Frames' tasks, or to merge or divide frames (see Figure 5-3).

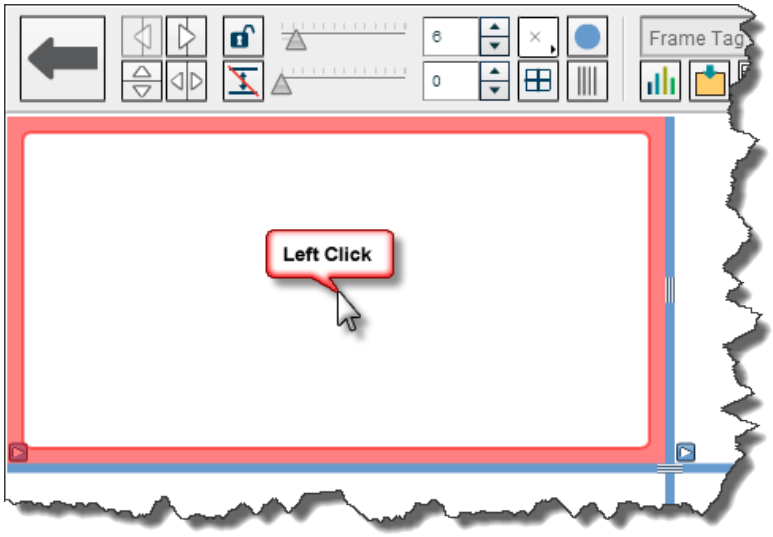


Figure 5-3

5.4 Editing Dashboard Layout

***Note**: See the beginning of this chapter for information on permissions.*

Once a dashboard layout has been determined, the user can continue to make changes to the dashboard layout. Editing the layout can take place at any point in time, even if the dashboard was built long ago.

To begin, open the dashboard that needs editing. Then, left-click on the cog (or gear) near the upper-left area of the application (see Figure 5-4). This will switch the application to the dashboard designer.

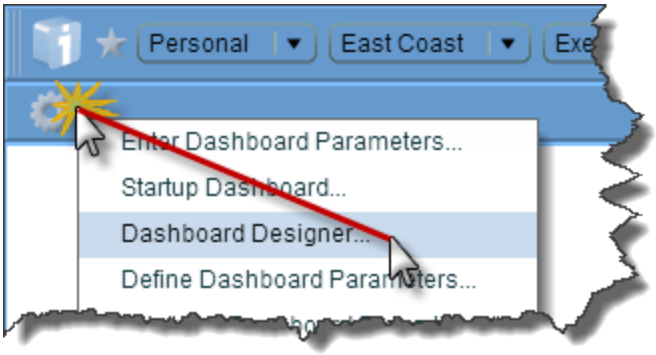


Figure 5-4

See Section 5.3, "Dashboard Designer" for a description of icons while in this interface. Some of the tasks available include: placing charts, clearing frames, moving frames, or placing images.

5.4.1 Frames: Size and Shape

After a dashboard has been created, any user with a User Role of User or higher can **Drag and Drop** the frame borders to create custom shapes and sizes for each frame in the dashboard. Note that the borders must be made before moving.

5.4.2 Frames: Add or Remove

After a dashboard has been created, a user can edit the number of frames within that dashboard. If the frame position is unlocked, then editing the position can take place using any of the user applications.

First click on the frame that needs to be removed or split. Then select one of the icons for merging or splitting (see Figure 5-5).

Figure 5-5

The option to split the frame horizontally or vertically will always be available when a frame is highlighted while various merge buttons will become available as appropriate. Not all buttons will be enabled when a frame is highlighted.

Following are the descriptions used when editing the number of frames:

	Split frames borders: • Split Horizontal: This option will place a horizontal (right to left) divider through the center of the frame. • Split Vertical: This option will place a vertical (top to bottom) divider

	through the center of the frame.
	Merge frames borders • Merge Left: This option will merge the current frame with the frame to its immediate left. • Merge Right: This option will merge the current frame with the frame to its immediate right. • Merge Up: This option will merge the current frame with the frame immediately above it. • Merge Down: This option will merge the current frame with the frame immediately below it.
	Auto-space frame borders when splitting frames
	Lock frame borders (Takes effect when changes are saved)

5.4.3 Frames: Tagging

"Frame Tags" are used to give logical names to frames within dashboards. These tags can then be used later as an option within a charts' drilldown. See Chapter 12, "Chart Properties: Drilldowns" for more information about drilldowns.

To set up a tag, highlight the frame you want to tag and type the logical name into the "Frame Tag" textbox (see Figure 5-6). To remove a tag, highlight the frame and delete the contents of the "Frame Tag:" text box. While in the Dashboard Designer, the frame tags will be visible and highlighted in yellow. Once the Dashboard Designer is switched back into the User Application, the frame tags will disappear from view, but still available for use with drilldowns.

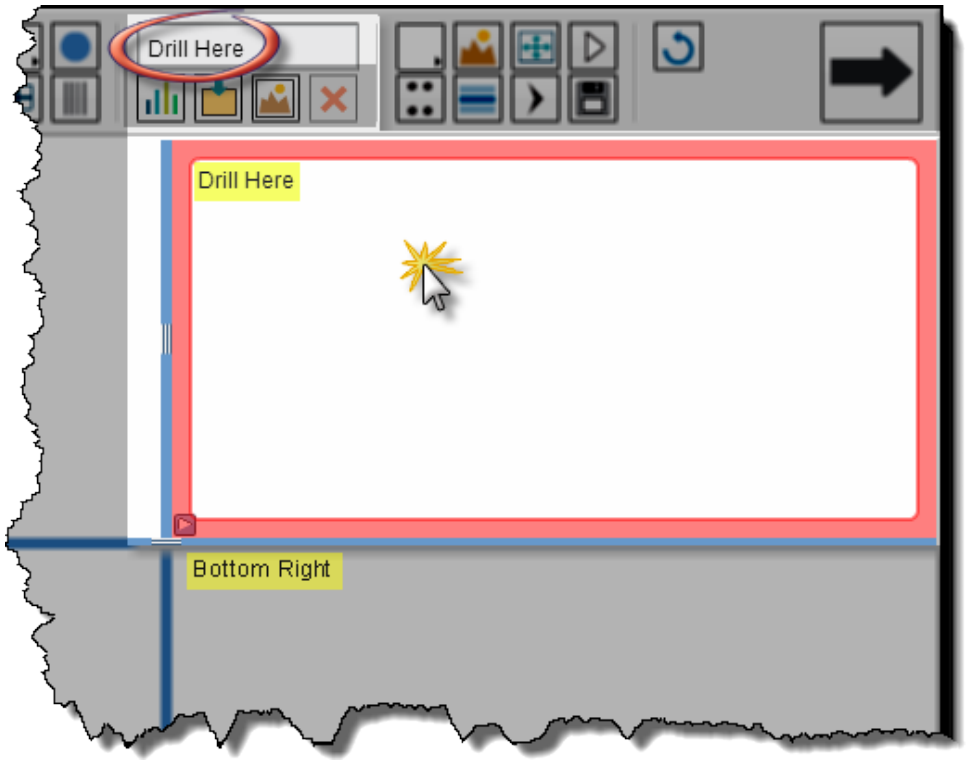


Figure 5-6

5.5 Place Existing Charts into Dashboard

Existing charts can be placed into a dashboard frame for viewing. This can be achieved using two different methods: through the User Application or Dashboard Designer.

***Note**: If no charts exist, refer to Chapter 7, "Creating Charts: Dynamic Data" and Chapter 6, "Creating Charts: Static Data".*

5.5.1 Open Charts through User Application

Right-click within a dashboard frame and select 'Open Chart…". A new window will appear, displaying the category names on the left, then the chart names on the right. Or, the user can use a live word search to locate the chart name (see Figure 5-7). Selecting the chart and clicking "Open" will retrieve the chart into the frame where the user performed the right-click. Repeat until the dashboard has been populated with all the charts necessary.

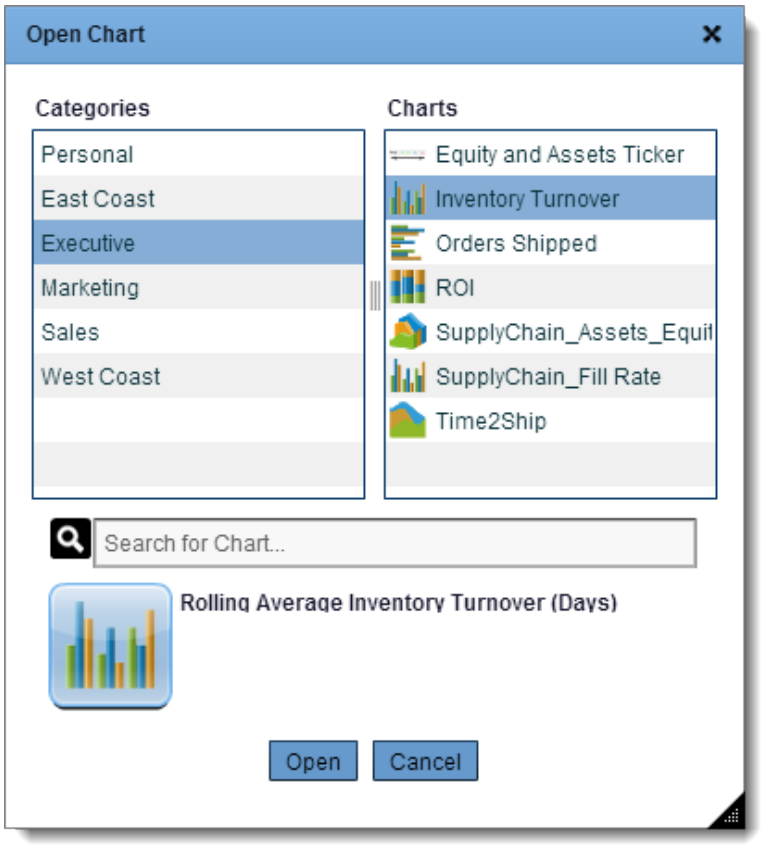


Figure 5-7

5.5.2 Open Charts through Dashboard Designer

This option is only available while in the Dashboard Designer. First select the icon for placing existing charts into a frame. A new window will appear, displaying the category names on the left, then the chart names on the right. Or, the user can use a live word search to locate the chart name. Once the chart has been located, Drag and Drop the chart into the desired dashboard frame (see Figure 5-8).

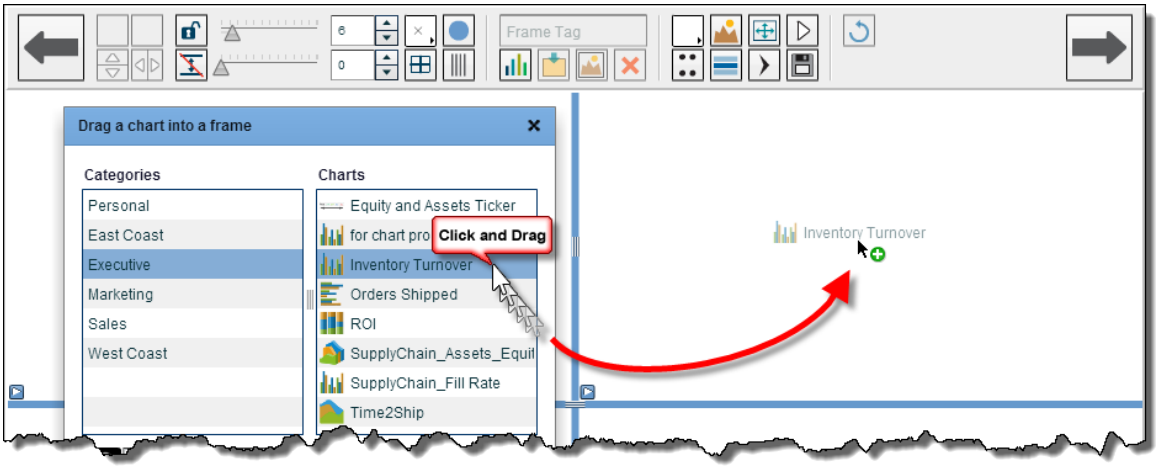


Figure 5-8

5.5.3 Move dashboard items within Dashboard Designer

Without the need to launch any window, the Dashboard Designer allows text panels, images, charts, etc. to be repositioned by Drag and Drop. The items will switch position when using this process. See Figure 5-9 below to see an illustration for how a dashboard can be changed using this technique.

Before
After
Drag and Drop
Rolling Average Inventory Turnover (Days)
Assets & Equity
Dashboards
Driving Business Decisions
This dashboard uses information from our central ERP database. Please report to your manager any suggestions to improve efficiency.

Figure 5-9

5.6 Saving the Dashboard

The dashboard is edited and created locally within the browser, until the user chooses to save the dashboard to the server. There are two environments when a user has the option to save the dashboard. If the dashboard has never been saved, a prompt will appear requesting a dashboard name and category location.

***Note**: Dashboards and charts must be saved independent of one another.*

5.6.1 Save within the Dashboard Designer

Click the save icon while using the Dashboard Designer to save all changes. This will also remove all 'undo' history.

5.6.2 Save within the User Application

A red triangle in the upper left corner of the dashboard title bar indicates the dashboard is not saved (see Figure 5-10). This triangle will appear every time a modification to the dashboard is made.

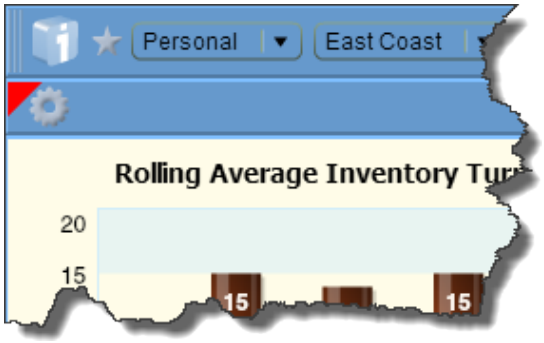


Figure 5-10

To save the dashboard, right-click anywhere within the dashboard framework and select the 'Save Dashboard As…' option from the right-click menu. Alternatively, click the Application Menu button at the lower left of the screen and select 'Save Dashboard As…'

Note: *The 'Save Dashboard' option in the right-click menu will act the same as 'Save Dashboard As…' when it is the first time the dashboard is being saved.*

The **Save Dashboard As** window will pop up on the screen. This window will have a list of Categories to which you have Save permissions. Select a Category to save your dashboard and give the dashboards a name (see Figure 5-11). Optionally, type a description of the dashboard. The Description field has a limit of 300 characters.

Note: *Avoid special characters such as- $, #, % in any of the input fields, Name or Description, when saving a dashboard.*

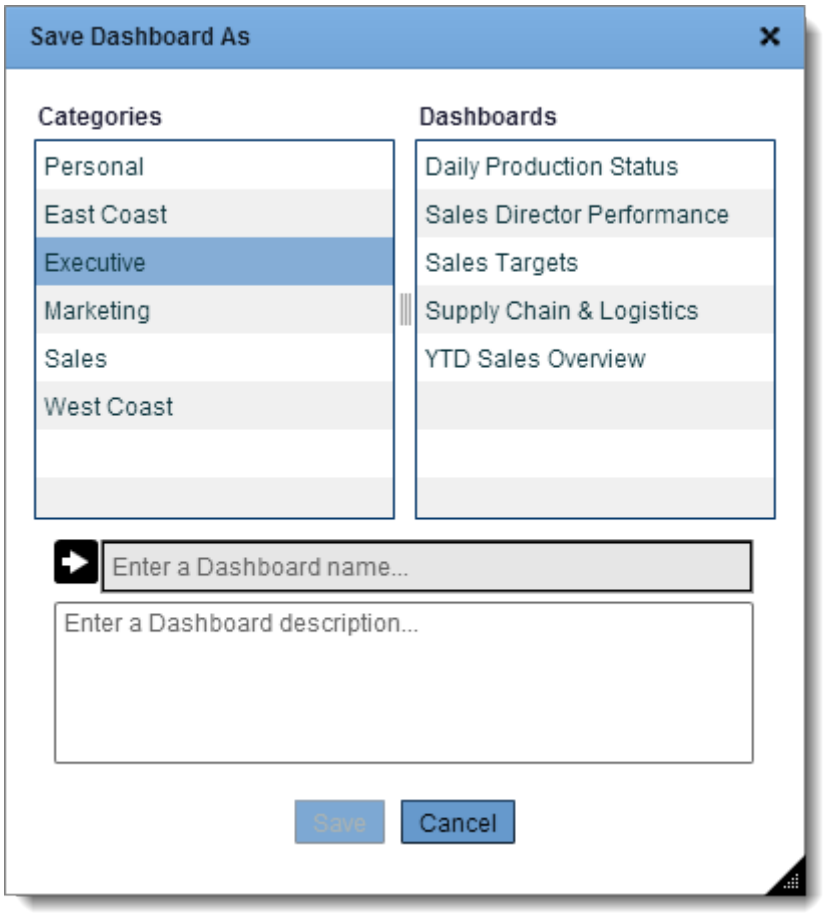


Figure 5-11

When viewing the dashboards, the Category will precede the dashboard name on the top of the dashboard. In the Figure 5-12, "Executive" is the Category within which the "Inventory Turnover" dashboard was saved. You can hide the Category name by checking the 'Hide Category in Title' option within the dashboards properties.

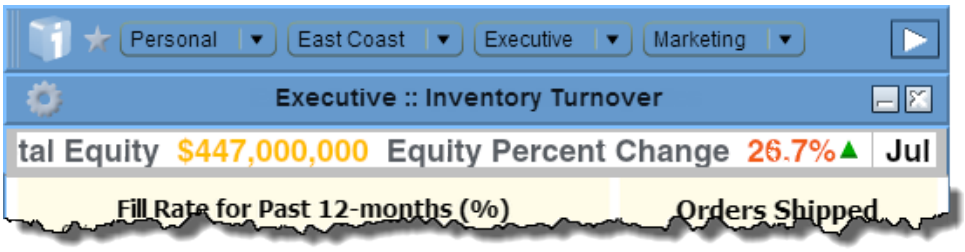


Figure 5-12

5.7 Frame Borders

Frame borders can be adjusted on the screen using the mouse to click-and-drag the position. Frames can be merged or divided, widened or narrowed, locked or unlocked, moved, or visually changed.

Using the example settings in Table 1, the frame borders were customized, and a dashboard background color was added to create Figure 5-13. The red arrows in the figure illustrate where the vertical frame border appears; and illustrates how a 50% transparent white frame appears grey when placed over a black dashboard background.

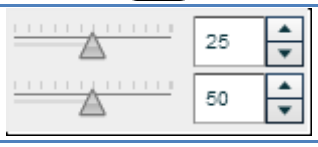
Icon	Setting	Value
	Dashboard background color	000000 (Black)
	Frame border color	FFFFFF (White)
	Frame border thickness	25
	Frame border transparency	50

Table 1

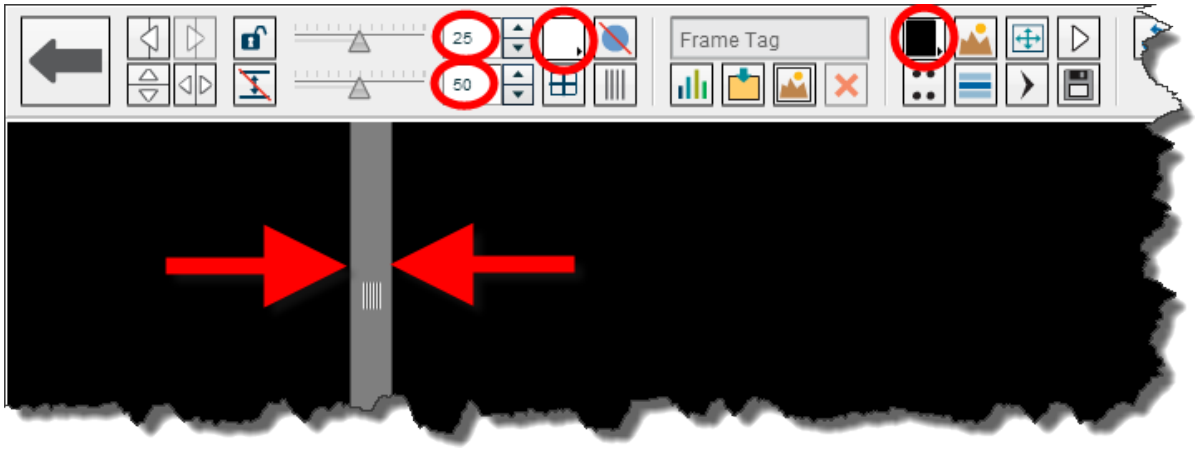


Figure 5-13

5.7.1 Frame Borders: Positioning

While working in the dashboard designer, frame borders will have the option to be repositioned, under all but one circumstance; if the frame borders are hidden. Therefore, make sure to show frame borders before attempting to change their position. The purpose of moving a frame border is to provide different size regions for embedded charts, images, or text.

Regardless of the frame border thickness, users can click-and-drag a border to change the position. Notice the X & Y coordinates in the lower-left corner of the application (see Figure 5-14). These coordinates can help a designer perfectly align one frame with another, or keep frames consistent across multiple dashboards.

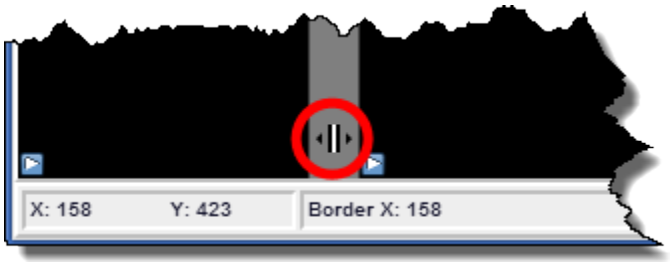


Figure 5-14

5.7.2 Frame Borders: Show or Hide

Frame borders are the dividers between each frame that are created with all new dashboards. For aesthetic purposes, the borders can be hidden. Examples of the same dashboard with borders on and off are displayed in Figure 5-15 and Figure 5-16.

Note: *The default setting is to have the 'Show frame borders' option checked when a user creates a new dashboard.*

Within the Dashboard Designer, click the icon to hide the boarders or click the icon to show the borders.

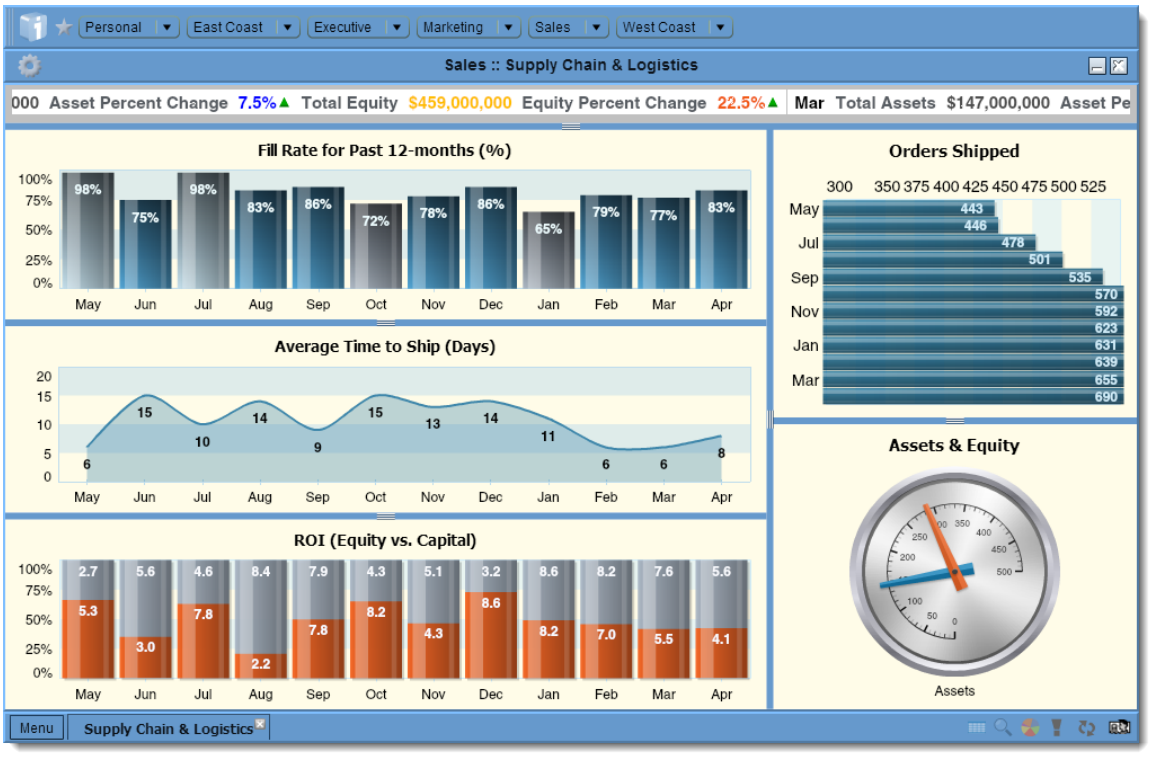

Personal
East Coast
Executive
Marketing
Sales
West Coast
Sales :: Supply Chain & Logistics
000 Asset Percent Change 7.5%▲ Total Equity $459,000,000 Equity Percent Change 22.5%▲ Mar Total Assets $147,000,000 Asset Pe
Fill Rate for Past 12-months (%)
Orders Shipped
Average Time to Ship (Days)
ROI (Equity vs. Capital)
Assets & Equity
Assets
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
Menu
Supply Chain & Logistics

Figure 5-15

Figure 5-16

5.8 Dashboard Backgrounds

The background of a dashboard can either be a single, customized color or an image.

To begin, open the dashboard that needs editing. Then, left-click on the cog (or gear) near the upper-left area of the application (see Figure 5-4). This will switch the application to the dashboard designer.

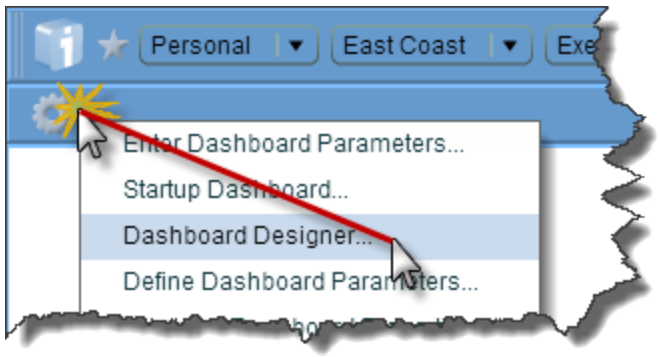


Figure 5-17

5.8.1 Dashboard Background Color

A background color can be applied to the entire dashboard. This color will be visible in any empty dashboard frames as well as in any chart with transparency. From the Dashboard Designer, click on the icon to set the dashboard background color.

5.8.2 Dashboard Background Image

A background image can be applied to the entire dashboard. This image will be visible in any empty dashboard frame as well as in any chart with transparency. An example can be seen in Figure 5-18.

Note: *Images can be uploaded to iDashboards through the Administrator Interface. This will cause the image to appear in the selection window. Images may also be referenced by URL, but this setting requires the Administrator to enable the Proxy Server or Cross-Domain policy. See the Administrator manual for details on adjusting these settings.*

Figure 5-18

From the Dashboard Designer, click on the icon to set the dashboard background image. An image selection window will appear, allowing an image to be selected from the iDashboards server. Before applying the image, a user can click the 'Preview' button to see a preview of the image (see Figure 5-21).

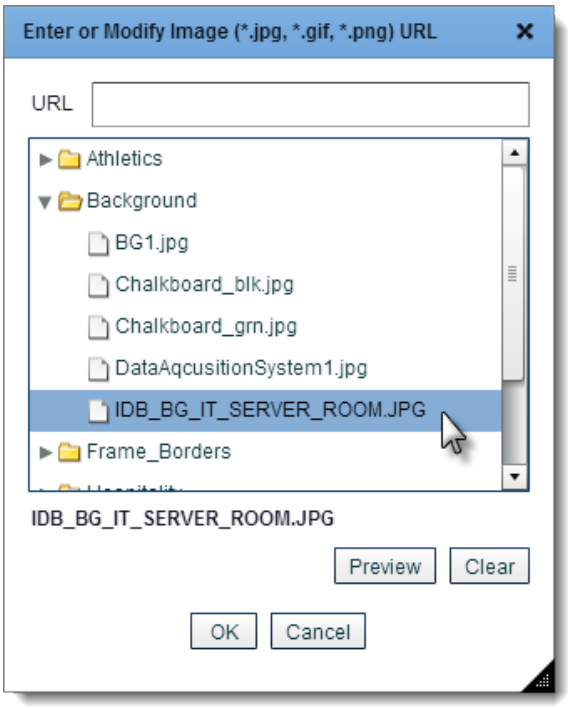


Figure 5-19

***Note**: If the proxy server settings have been enabled by the Administrator, a checkbox will appear within this window. This feature allows for linking out to an internet-hosted image file and won't require uploading the file through iDashboards Administrative Application. Check the box and place the URL of an image file (see Figure 5-20).*

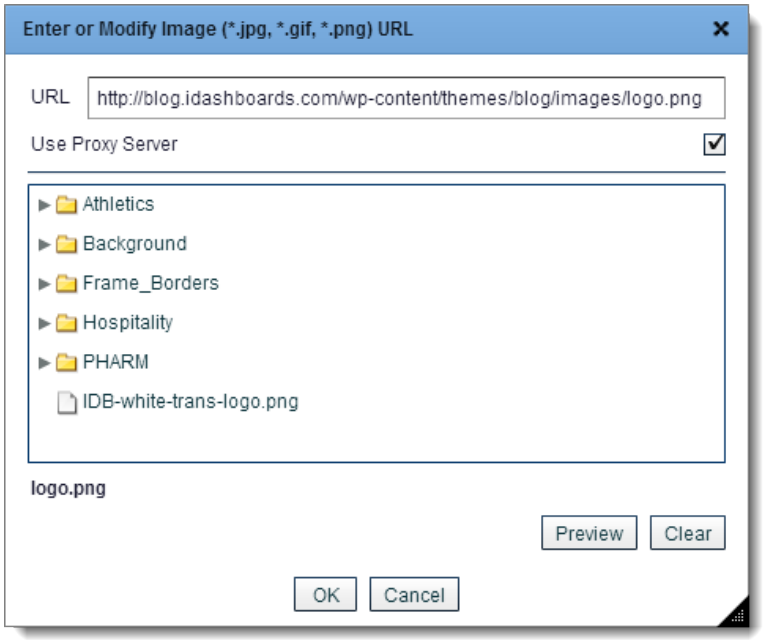


Figure 5-20

***Note**: See Section 10.1.6, "Color Layers and Transparency" for details on how images are layered within the dashboard.*

5.8.3 Fit Background Image to Dashboard

Background images display at its default resolution and is justified in the center of the dashboard. From the Dashboard Designer, click on the icon to stretch the dashboard background image into the full dashboard.

5.9 Show Chart-Menu Buttons

Chart-Menu Buttons are displayed in the lower left corner of a chart and are created with all new charts. These buttons pull up the menu that lists the actions you can perform on a chart. For aesthetic purposes, the menu buttons can be removed. From the Dashboard Designer, click on the icon to hide chart menu buttons. Examples of the same chart with Chart-Menu Buttons on and off are displayed in Figure 5-21 and Figure 5-22.

Figure 5-21

Figure 5-22

5.10 Synchronized Highlighting

When you mouse over various data points within a chart, other data points in that chart will fade out. Also, through "Interactive Intelligence" related data points in other charts on the dashboard are simultaneously highlighted and other data points in those charts are faded out. This is intended behavior of iDashboards. This feature is designed to strongly draw attention to the value you are hovering over.

From the Dashboard Designer, click on the icon to disable synchronization. Note the behavior of the same dashboard with 'Synchronize highlighting' checked (see Figure 5-23) and unchecked (see Figure 5-24).

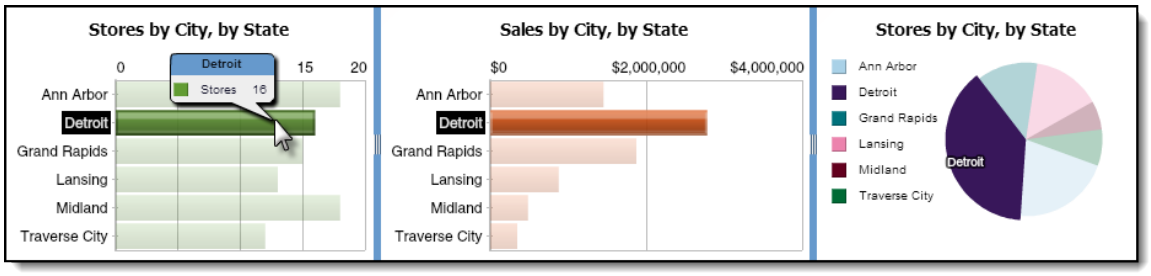


Figure 5-23

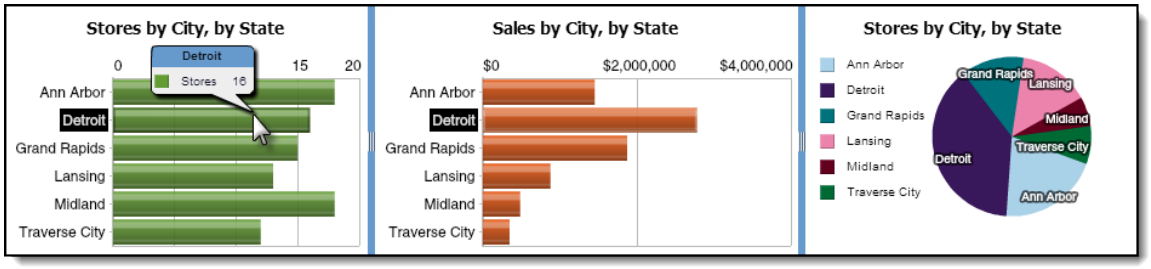


Figure 5-24

Synchronized highlighting works in conjunction with the Match Types features of a chart. Match Types help manage the underlying matching rules that in-turn control the visual display of related data points within the same chart and across different charts. This technology, called 'Interactive Intelligence', is built-in functionality of iDashboards. It allows you to hover over a data point in one chart and have related data points in all charts within the same dashboard appear highlighted. This is a powerful feature to highlight the data relevance across various charts in a meaningful fashion and help users get a better insight of the information being presented.

To view or change the Match Type select the 'Chart Properties…' option from the Chart Menu or right-click on a specific chart to access its' Chart Properties' options.

To access these features expand the 'Basic Settings' section under the 'Features' tab. Note the three possible options for Match Type; 'X Value', 'Y Axis Name' and 'Y Value'. By default the 'X Value' option is selected (see Figure 5-25).

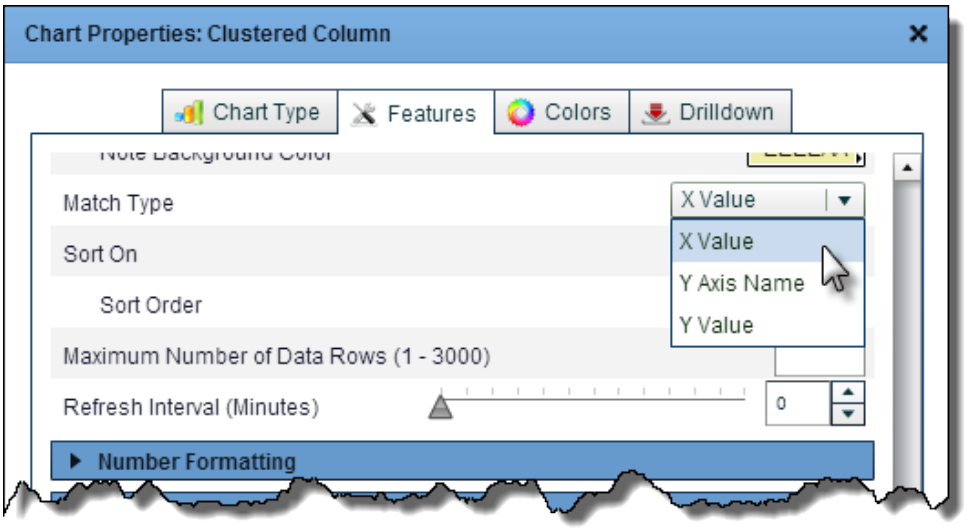


Figure 5-25

- 'X Value' Matching highlights all data points in all charts that have the same value for the X-axis (independent variable) as the data point you are hovering over (see Figure 5-26).
- 'Y Axis Name' Matching highlights all data points in all charts that have the same label of the Y-axis (dependent variable) as the data point you are hovering over (see Figure 5-27). As you hover over the label "Public" in the speedometer chart, the data represented by the "Public" Y-axis label of the line chart is highlighted.
- 'Y Value' Matching highlights all data points in all charts that have the same value for the Y-axis (dependent variable) as the data point you are hovering over (see Figure 5-28).

Figure 5-26

Figure 5-27

City	AMF101	AMD203	ACP101	CEL443	AVERAGE
New Haven	66	85	66	54	67
Windham	73	64	90	77	76
Fairfield	82	83	83	66	78
New London	90	65	98	90	85
Middlesex	54	41	57	71	55
Los Angeles	81	90	99	71	85
Modesto	93	60	80	90	80
Oakland	73	46	40	98	64
Sacramento	60	82	89	43	68
San Diego	58	71	63	62	63
San Francis...	42	98	98	90	82

Figure 5-28

5.11 Synchronize Pivots

Synchronize pivots forces the dashboard to automatically synchronize related pivots in all charts that exist in that dashboard. For synchronization to work, the pivots must have the same Y-axis label name. This does not require identical data in the Y-axis, but the pivots will not synchronize on a data point if both pivots don't have that data.

From the Dashboard Designer, click on the icon to disable synchronization.

For example, if two charts have a pivot named "State" and Synchronize Pivots is enabled, they will be synchronized. If a user changes the pivot value in one of the charts, the pivot value in the other chart will automatically change to the same value and both charts will be refreshed to show data relating to that pivot value (see Figure 5-29). If the Synchronize Pivots is disabled, they will not be synchronized. The pivot in the other chart will not automatically change and that chart will not be refreshed.

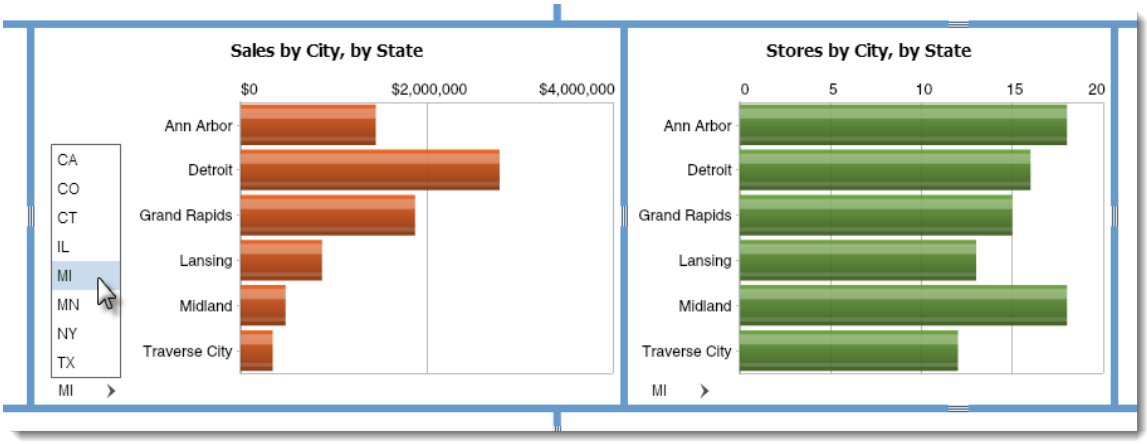


Figure 5-29

5.12 Changing Dashboard Category (Move Dashboard)

A user can move an existing dashboard from category into another. The user must have 'Save' permissions on the source and destination category.

To change the category for a dashboard, first open the dashboard. Then, right-click within the Category header bar and select the 'Extended Dashboard Properties…' option from the right-click menu. Then, from the new window, use the Category drop-down list to pick the new Category (see Figure 5-30). Alternatively, click the Application Menu button at the lower left of the screen and select 'Extended Dashboard Properties …'

The dashboard must be saved to complete this task.

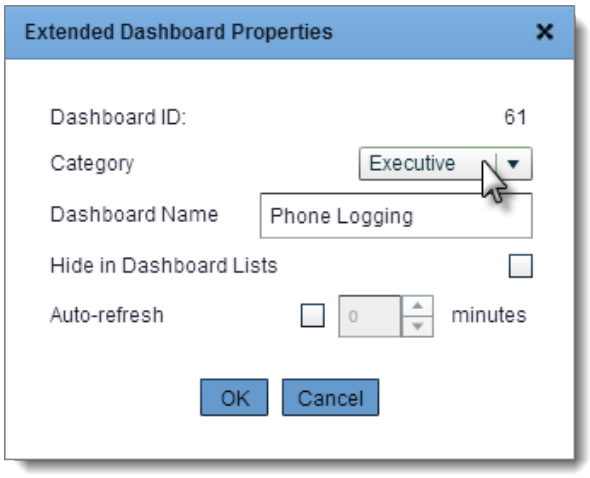


Figure 5-30

Note: *The* Dashboard ID *will not change. If you perform a 'Save Dashboard As…' on the dashboard then a new dashboard will be created with a new* Dashboard ID.

5.13 Rename a Dashboard

Dashboards that have already been saved can be renamed. The user must have 'Save' permissions on the category where the dashboard resides.

To rename a dashboard, first open the dashboard. Then, right-click within the Category header bar and select the 'Extended Dashboard Properties…' option from the right-click menu. Lastly, provide the new dashboard name (see Figure 5-31). Alternatively, click the Application Menu button at the lower left of the screen and select 'Extended Dashboard Properties …'

The dashboard must be saved to complete this task.

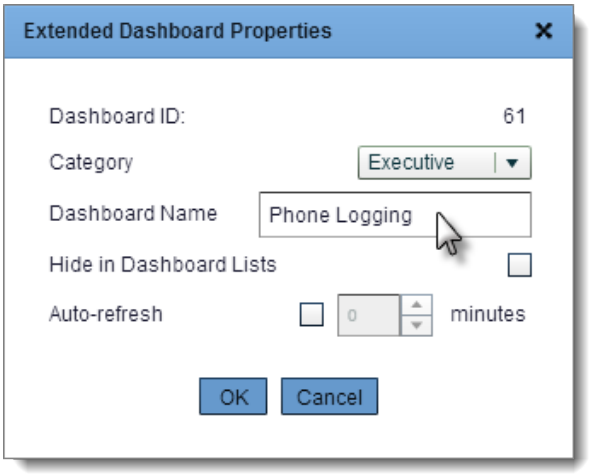


Figure 5-31

Note: *The* Dashboard ID *will not change. If you perform a 'Save Dashboard As…' on the dashboard then a new dashboard will be created with a new* Dashboard ID*.*

5.14 Hide Category in Title

By default, a dashboard title includes the Category name followed by the Dashboard name. The Category name can be hidden from view using a dashboard setting (see Figure 5-32).

From the Dashboard Designer, click on the icon to hide the Category name.

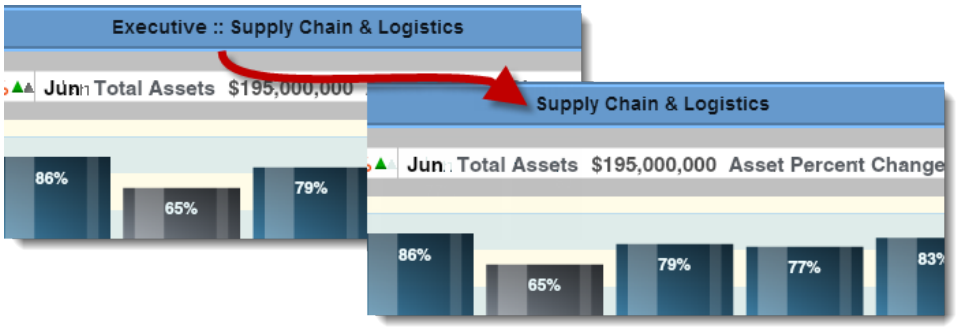


Figure 5-32

5.15 Hide Dashboard

If a user has 'View' or 'Save' access to a Category, all dashboards will be displayed when viewing the category drop-down list during the open command. However, hiding a dashboard within a category is especially beneficial when drilling down into a dashboard. Hiding the target dashboard will keep users from opening the dashboard natively.

To hide a dashboard, first open the dashboard. Then, right-click within the Category header bar and select the 'Extended Dashboard Properties…' option from the right-click menu. Next, place a checkbox in the setting 'Hide in Dashboard Lists' (see Figure 5-33).

***Note**: Dashboards can be hidden by the administrator, using the Administrative Application.*

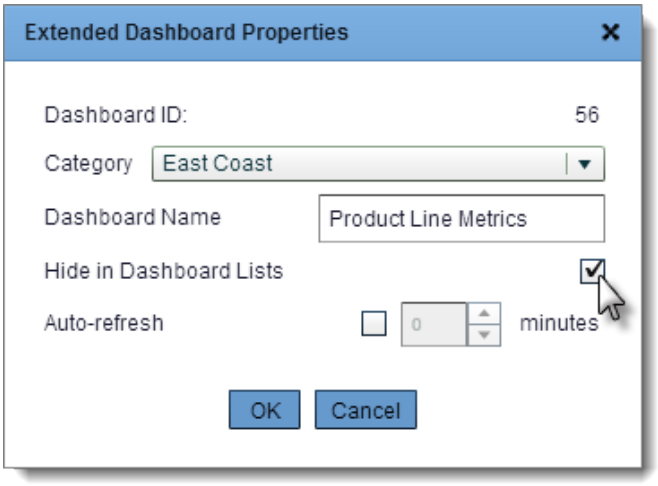


Figure 5-33

5.16 Refresh an Open Dashboard

Refreshing a dashboard will force each chart to re-query the data source; to display the most current information since the dashboard was last opened. There is no need to close the browser or log out of the current session. Nor does the dashboard need to close and reopen. Refreshing the web browser or selecting F5 will log the user out of the current session.

5.16.1 Manual Refresh Dashboard

If you opened a dashboard some time back and would like to make sure that it displays the latest data from its data sources, simply click on the refresh icon on the bottom right corner of the open dashboard (see Figure 5-34). By clicking the refresh button, only the currently displayed dashboard will refresh. All other open dashboards will not refresh.

Figure 5-34

5.16.2 Auto Refresh Dashboard

Auto-refresh option allows the open dashboard to be refreshed automatically at the time interval (in minutes) as defined within a dashboard setting. Any value lower than 1 minute or higher than 10 minutes is not permissible for this setting.

To enable Auto-refresh on a dashboard, right-click within the Category header bar and select the 'Extended Dashboard Properties…' option from the right-click menu. Next, provide the refresh interval (in minutes) (see Figure 5-35). Alternatively, click the Application Menu button at the lower left of the screen and select 'Extended Dashboard Properties …'

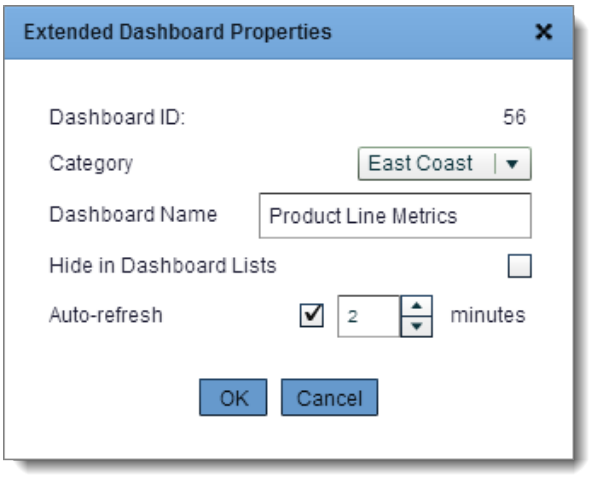


Figure 5-35

Note: *The preferred way to set up auto-refresh is on a chart level. See Section 10.1.15, "*Chart Refresh*" for more info on chart level auto-refreshing.*

Note: *The default setting is to have the 'Auto-refresh' option disabled within new dashboards.*

6. Creating Charts: Static Data

You can create a new chart by providing data for the chart through four ways:

Static Data (CH 6)	1. Entering the data manually 2. Importing the data from an Excel spreadsheet (this is a one-time import) 3. Importing the data from a comma separated values file (this is a one-time import)
Dynamic Data (CH 7)	4. Retrieving the data from a live data source

This chapter describes only the first three methods, while the fourth method is discussed in Chapter 7, "Creating Charts: Dynamic Data". The decision to make either chart type is determined in the first step while creating a chart (see Figure 6-1).

Charts cannot be created while in the Dashboard Designer, they can only be created when using the main User Application. To create a new chart within a frame of iDashboards, right-click in the desired frame and select the 'New Chart…' option from the right-click menu. Alternatively, click 'New Chart…' from the Chart Menu button of the desired frame.

6.1 Creating X and Y Labels

Upon clicking the option, an **Axis Labels** window opens (see Figure 6-1). Enter your X-axis label for the independent variable (i.e. horizontal axis in a line chart). Enter your Y-axis label(s) for the dependent variables (i.e. vertical axis in a line chart), clicking the "Add Label" button after each Y-axis is entered. This will place the Y-axis label(s) into the lower box. You can add multiple Y-axis labels, one for each dependent variable. Click the "Enter Data" button to proceed after adding all the Y-labels you would like in the chart.

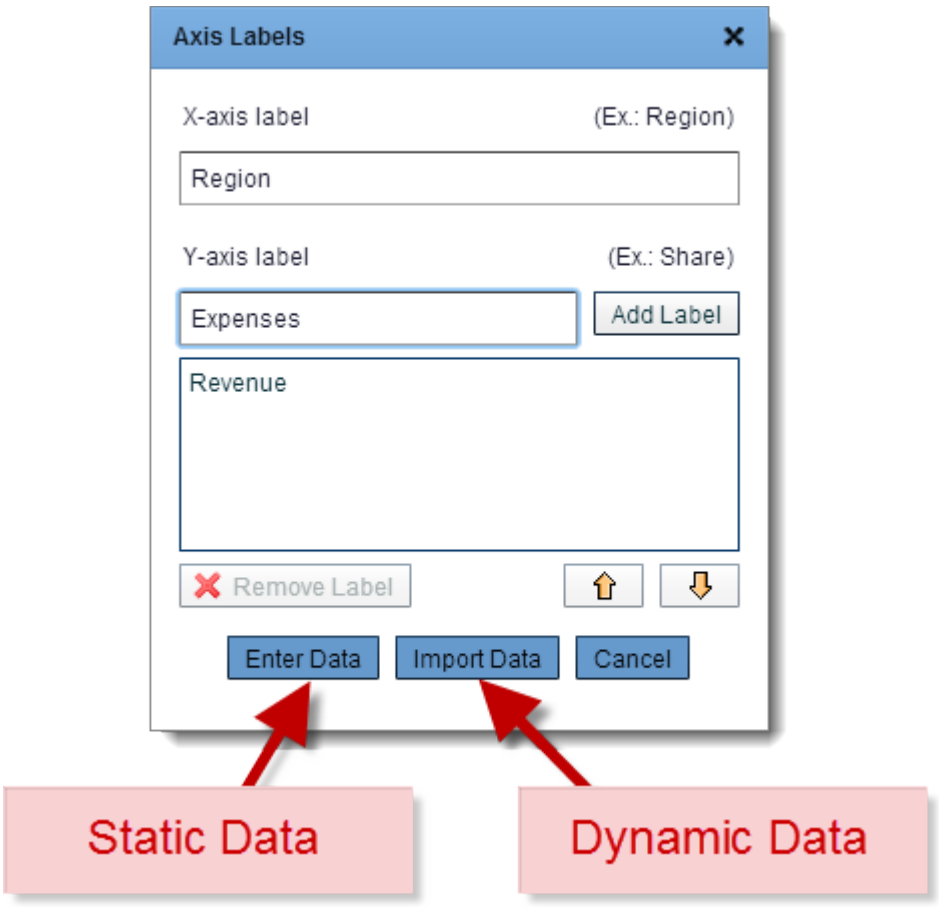


Figure 6-1

Note: *The "Import Data" button will only be visible for users with the Analyst or Admin roles.*

6.2 Entering the Data

After clicking the "Enter Data" button, you will see the **Upload Chart Data** window with a dropdown list of options to manually add data (see Figure 6-2). Choose one of the three options to manually define the chart data, import the data from Excel or import the data from a delimited file.

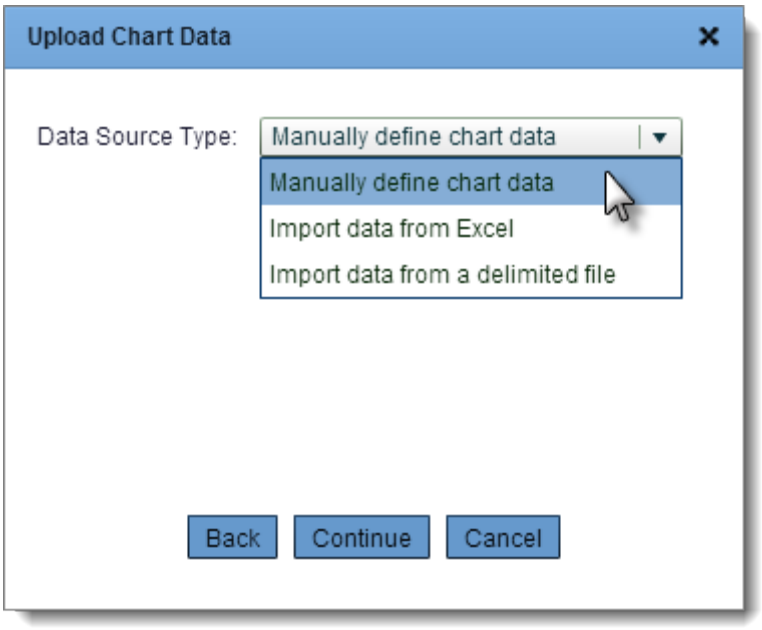


Figure 6-2

6.2.1 Manually define chart data

Choose the "Manually define chart data" dropdown option and click the "Continue" button to bring up the **Chart Data Columns** window (See Figure 6-3). This option will import the data as static data into the iDashboards application.

Note: *The imported data will only get saved in iDashboards when the chart is saved.*

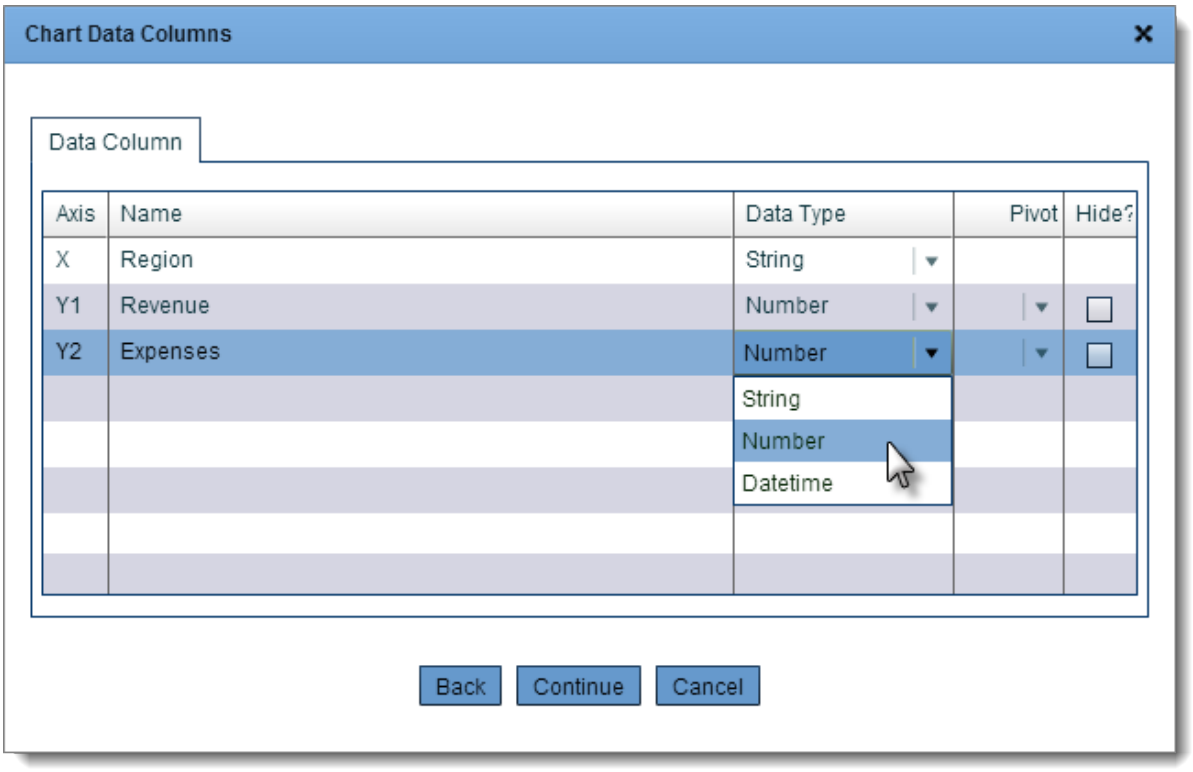


Figure 6-3

At this point you should select the proper data type for each axis label, choose if you would like to pivot on that axis and choose to either hide or display the axis in the chart. Once the options have been set, click the "Continue" button. This opens the **View/Edit Chart Data** window (See Figure 6-4).

Note: *See Chapter 16, "*Advanced Chart Features*" for a more in-depth explanation of Pivots and the Hide functionality.*

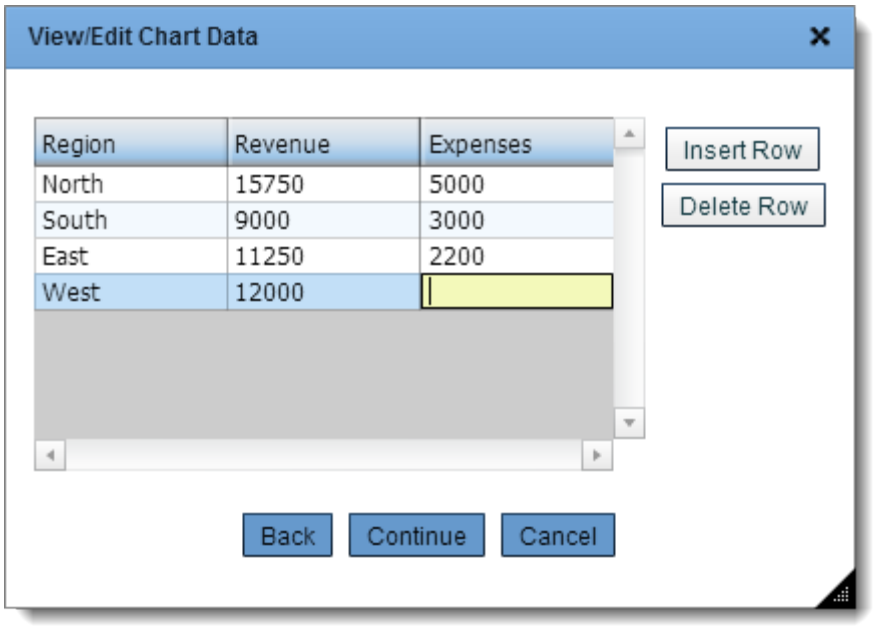


Figure 6-4

The **View/Edit Chart Data** window allows for editing of the data before it is displayed in the chart. Input the data values by completing each of the data fields in each data row. Add additional rows for data entry by clicking the "Insert Row" button. This will prompt to insert a row above or below the current row. Delete a row by placing the mouse cursor in the row and clicking the "Delete Row" button. Click the "Continue" button to choose the chart type. Choosing the chart type is covered in Section 6.3, "Selecting Chart Type".

Note: *iDashboards will allow for blank data fields. When the chart is displayed, it will display the chart properly, leaving blank areas corresponding to the blank data fields.*

6.2.2 Import Data from Excel

Selecting the "Import Data from Excel" dropdown option will display a number of options related to using an Excel spreadsheet as a data source (See Figure 6-5). Importing Excel data using this method will import the data as static data into the iDashboards application.

Note: *The imported data will only get saved in iDashboards when the chart is saved.*

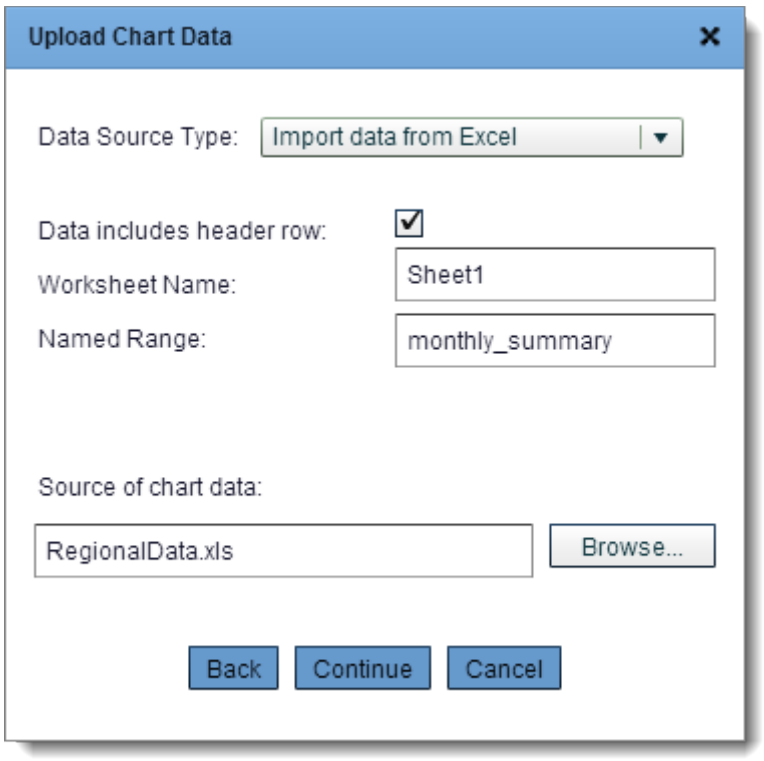


Figure 6-5

Check the box 'Data includes header row:' if the first row of the Excel data contains the name of each column. When a header row is used, the Excel column names are retained and stored along with the data in iDashboards. Column names should be less than 30 characters long, should begin with a letter and should only contain letters, digits and spaces. If the box is not checked, the first row in the Excel data is imported as the first data row.

Type the name of the worksheet in the "Worksheet Name:" field and/or type the Excel Named Range in the "Named Range:" field to identify the cells of data you would like to import. It is not necessary to use either of these fields unless you have multiple data areas in the spreadsheet. If you have a named range, it is not necessary to type the worksheet names, only the named range. A named range is a block of cells that is assigned a name within the workbook. When a connection to the workbook is established, each named range within the workbook can be used as a data source for an iDashboards chart.

Type the location and name of the Excel spreadsheet in the "Source of chart data:" field or use the "Browse" button to bring up a dialog box to determine the location of the file. Click the "Continue" button to bring up the **Chart Data Columns** window (See Figure 6-6).

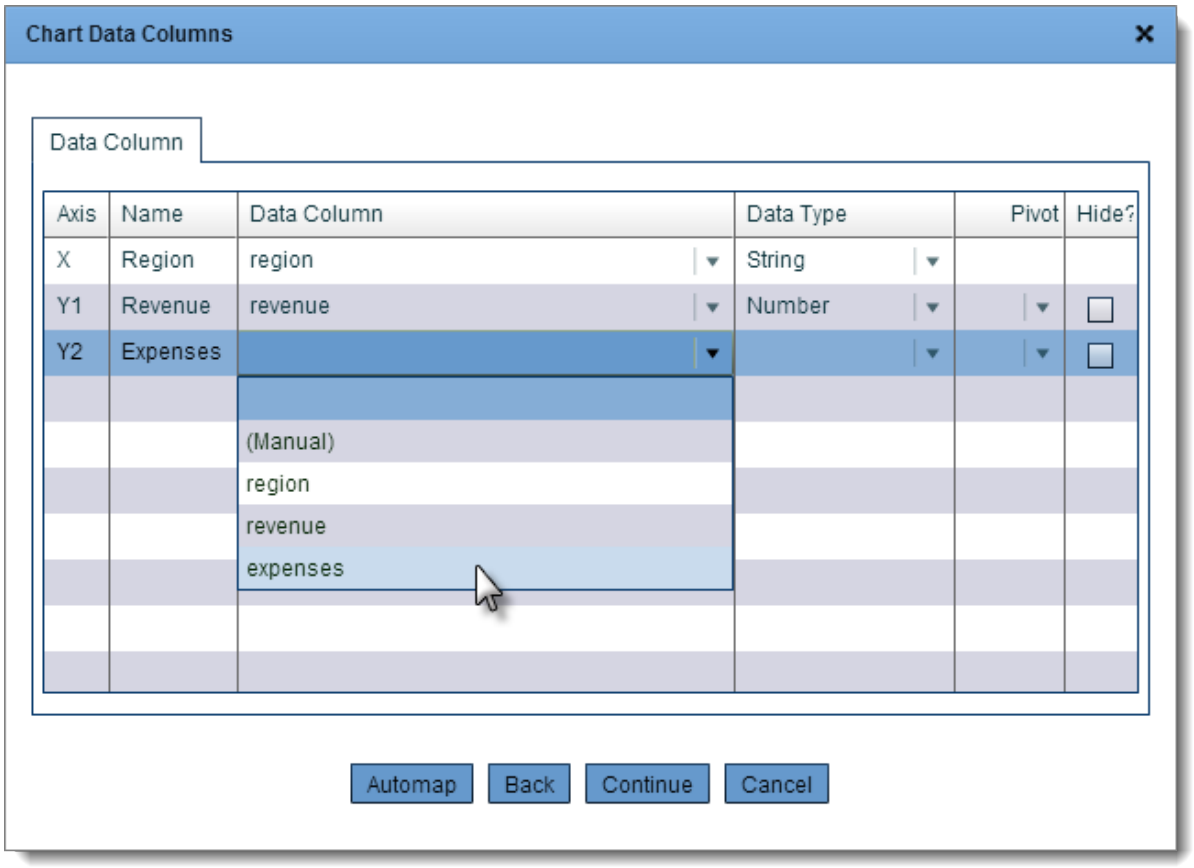


Figure 6-6

The **Chart Data Columns** window will allow the user to map the logically named columns from Figure 6-1 to the columns in the Excel spreadsheet. Select the proper data type for each axis, choose if you want to pivot on that axis and choose to hide or display the axis in the chart. Click the "Continue" button to bring up the **View/Edit Chart Data** window (see Figure 6-7).

The "**Automap**" button will automatically map the logically named columns to the columns in the Excel spreadsheet using one of three methods.

1. By: Exact Name: Case insensitive exact name match.
2. By: Position: Corresponding column in the imported data.
3. By: Best Match: Computes the best match for the columns.

Note: *These methods can be useful but may not always be accurate. Please validate the mappings should you select the "Automap" feature.*

Note: *See Chapter 16, "*Advanced Chart Features*" for a more in-depth explanation of Pivots and the Hide functionality.*

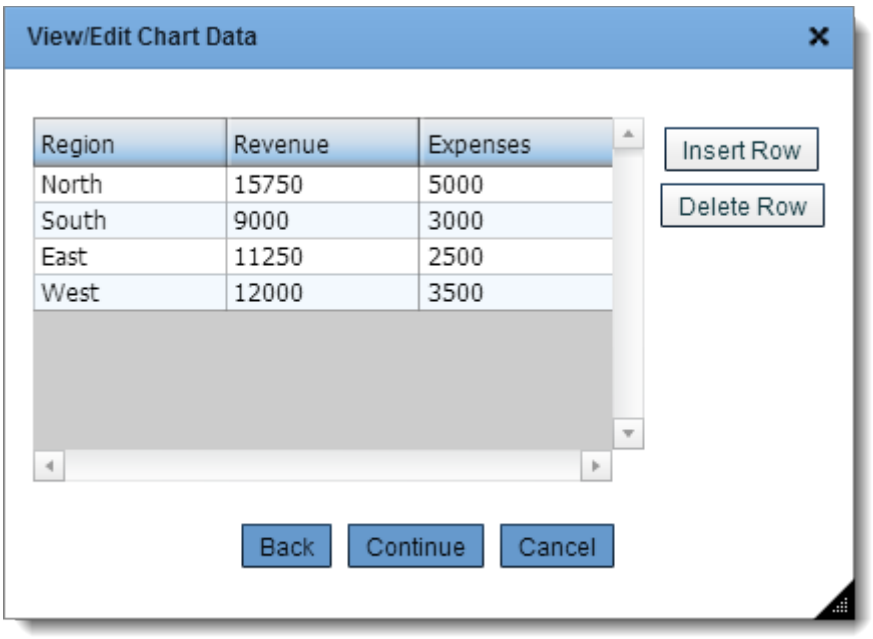


Figure 6-7

The **View/Edit Data** window allows for editing of the data before it is displayed in the chart. Make adjustments to the data by clicking in the cell. Add additional rows for data entry by clicking the "Insert Row" button. This will prompt to insert a row above or below the current row. Delete a row by placing the mouse cursor in the row and clicking the "Delete Row" button. Click the "Continue" button to choose the chart type. Choosing the chart type is covered in Section 6.3, "Selecting Chart Type".

6.2.3 Import Data from a Delimited File

Note: *At this time, the only supported delimited file type is a CSV file, or Comma Separated Value file. This file has a .**CSV** file extension.*

Choosing the "Import Data from a delimited file" dropdown option will display options to choose a delimited file as the data source (See Figure 6-8). This option will import the data as static data into the iDashboards application.

Note: *The imported data will only get saved in iDashboards when the chart is saved.*

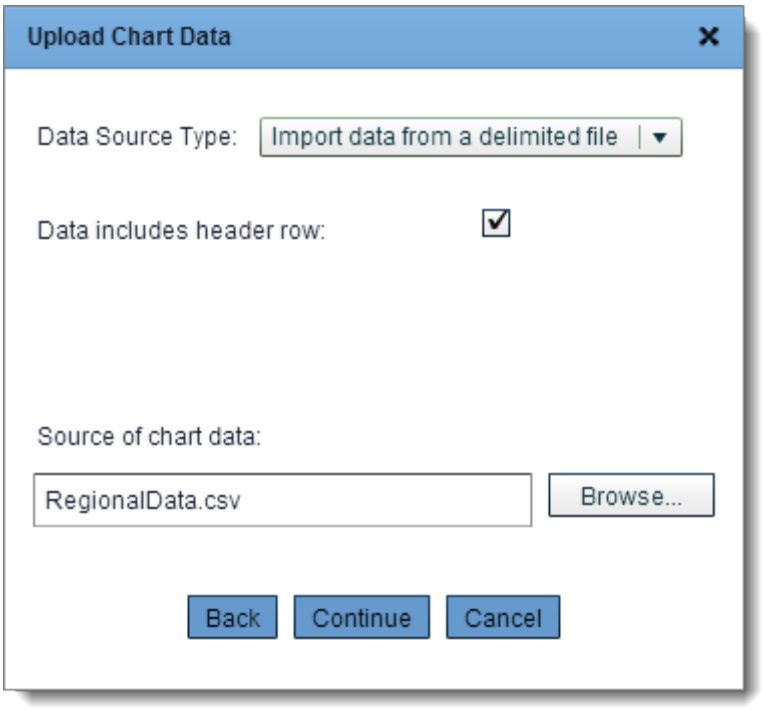


Figure 6-8

Check the box 'Data includes header row:' if the first row of the delimited data contains information regarding the column names. Type the location and name of the delimited file in the "Source of chart data:" field or use the "Browse" button to bring up a dialog box to locate the file. Click the "Continue" button to bring up the **Chart Data Columns** window (See Figure 6-9).

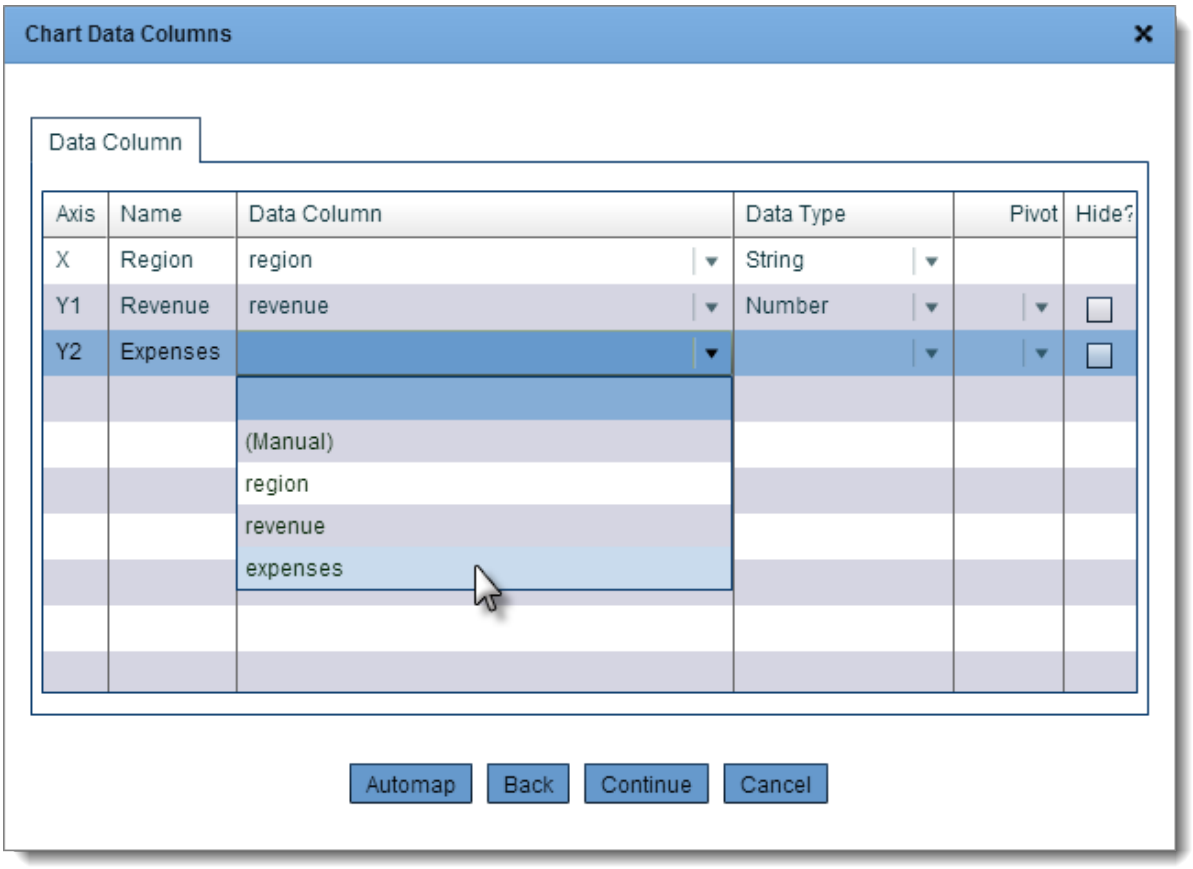


Figure 6-9

The **Chart Data Columns** window will allow the user to map the logically named columns from Figure 6-1 to the columns in the Excel spreadsheet. Select the proper data type for each axis, choose if you want to pivot on that axis and choose to hide or display the axis in the chart. Click the "Continue" button to bring up the **View/Edit Chart Data** window (see Figure 6-10).

The "**Automap**" button will automatically map the logically named columns to the columns in the Excel spreadsheet using one of three methods.

1. By: Exact Name: Case insensitive exact name match.
2. By: Position: Corresponding column in the imported data.
3. By: Best Match: Computes the best match for the columns.

Note: *These methods can be useful but may not always be accurate. Please validate the mappings should you select the "Automap" feature.*

Note: *See Chapter 16, "*Advanced Chart Features*" for a more in-depth explanation of Pivots and the Hide functionality.*

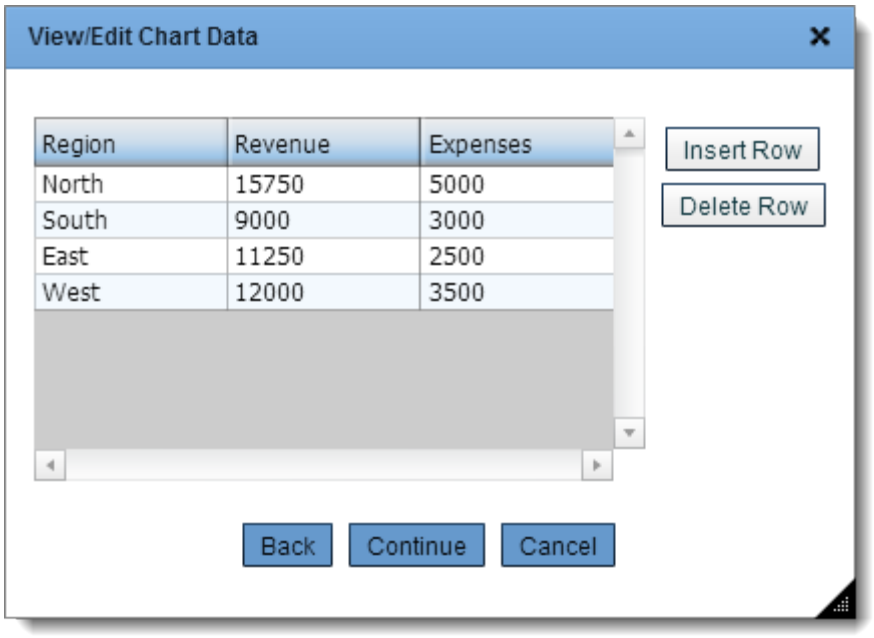


Figure 6-10

The **View/Edit Data** window allows for editing of the data before it is displayed in the chart. Make adjustments to the data by clicking in the cell. Add additional rows for data entry by clicking the "Insert Row" button. This will prompt to insert a row above or below the current row. Delete a row by placing the mouse cursor in the row and clicking the "Delete Row" button. Click the "Continue" button to choose the chart type. Choosing the chart type is covered in Section 6.3, "Selecting Chart Type".

6.3 Selecting Chart Type

The **Chart Properties…** window presents the user with the final step before displaying a chart (see Figure 6-11). In this step, select the chart group on the left and the actual chart type on the right. Click the "OK" button.

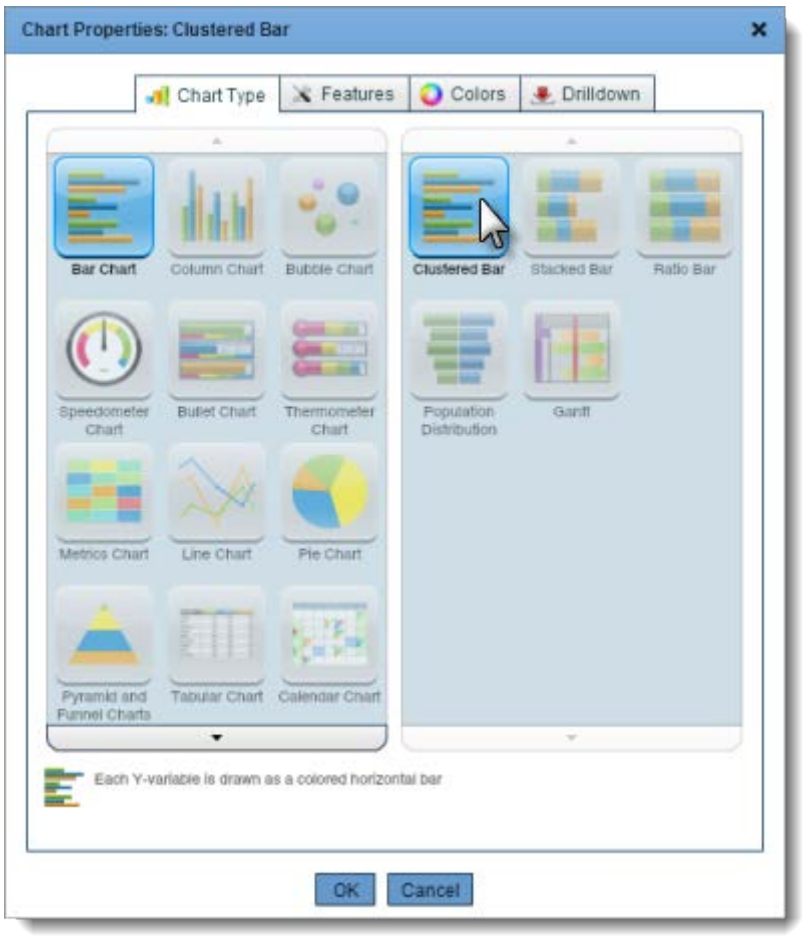


Figure 6-11

With the chart created, you may modify the chart type, other chart display options, and chart colors. Details for making these changes are discussed in Chapter 9, “Chart Properties: Chart Types”, Chapter 10, “Chart Properties: Chart Features”, and Chapter 11, “Chart Properties: Colors”.

6.4 Saving Charts

To save the chart you created, select the ‘Save Chart As…’ option from the right-click menu within the chart frame. Alternatively, click on the ‘Save Chart As…’ option within the Chart Menu of the chart's frame.

Clicking on the ‘Save Chart As…’ option opens a window with the option to choose a Category to save to. Only the Categories for which you have Save permissions (assigned by your iDashboards Administrator) will be displayed (see Figure 6-12).

Within the name input box, type the name of the chart as you want it to appear within the Category. The name can be no longer than 50 characters and is a required input. Note that chart names must be unique within a Category.

Within the title input box, type the title of the chart as you want it displayed on the chart itself. The title can be no longer than 50 characters and is optional to input.

Within the description input box, type the description of the chart as you want it displayed within the chart itself. The description is displayed when the mouse hovers over the title. The description field has a limit of 300 characters and it is optional to input.

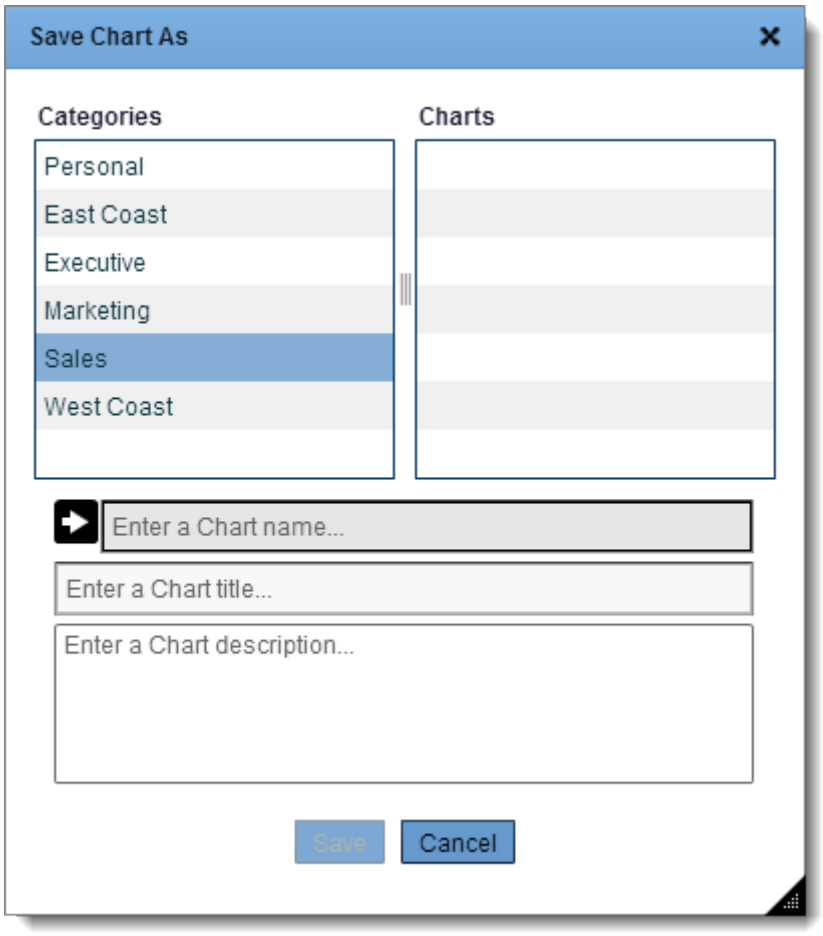


Figure 6-12

***Note**: Dashboards and charts must be saved independent of one another. Therefore, if all the charts are saved but the dashboard is not, the dashboard will not open the charts the next time it is opened.*

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7. Creating Charts: Dynamic Data

Note: *Creating charts by dynamically retrieving data from database requires knowledge of the database tables, views and columns. Therefore, this feature is restricted to users having Analyst or Administrator role.*

You can create a new chart by providing data for the chart through four ways:

Static Data (CH 6)	5. Entering the data manually 6. Importing the data from an Excel spreadsheet (this is a one-time import) 7. Importing the data from a comma separated values file (this is a one-time import)
Dynamic Data (CH 7)	8. Retrieving the data from a live data source

This chapter describes only the last method, while the first three methods are discussed in Chapter 6, "Creating Charts: Static Data".

To create a new chart in a frame of iDashboards, click on the 'New Chart…' option from the Chart Menu within that frame. Optionally you can choose to right-click in a frame and select the 'New Chart…' option in the right-click menu.

7.1 Creating X and Y Labels

Upon clicking the 'New Chart…' option, a small window titled **Axis Labels** opens. Enter your X-axis chart label for the horizontal axis (the independent variable). Enter your Y-axis chart label(s) for the vertical axis (the dependent variables) and click the "Add Label" button. This will place the Y-axis label into the lower box as shown in the Figure 7-1. You can add multiple Y-axis labels, one for each dependent variable. Click the "Import Data" button after adding all the Y-labels.

Note: The X and Y-axis labels appear on the corresponding chart axis and can be modified after creation. See Chapter 8, "Modifying Chart Data*" for more information on how to modify the column labels.*

Figure 7-1

7.2 Selecting the Source Object

Clicking the “Import Data” button opens a window called **Chart Data Source** that displays all the available data sources for which you have permission to use (see Figure 7-2). Data Sources are configured in the iDashboards Administrator Application by an iDashboards Administrator.

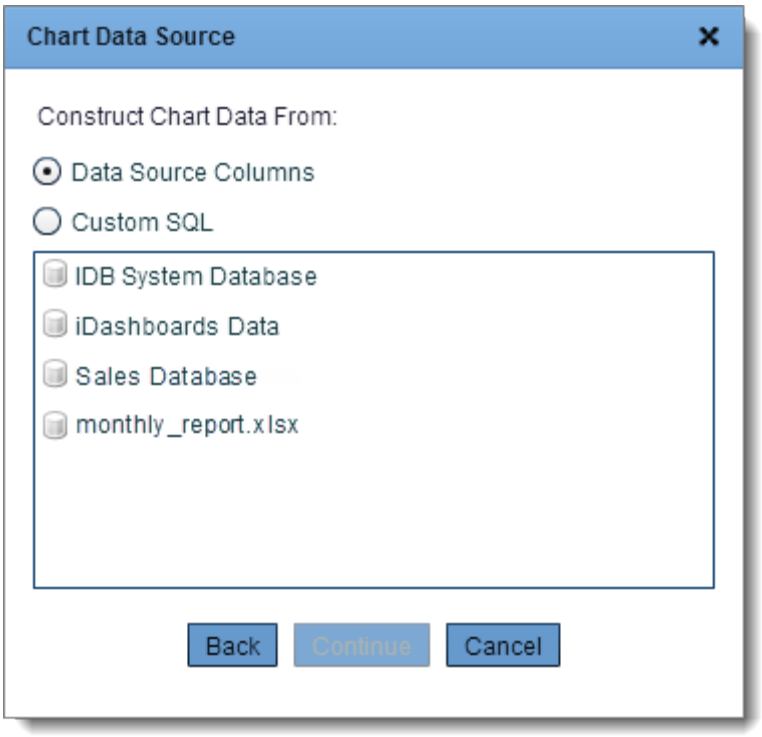

Figure 7-2

Select the data source you would like to use and click "Continue". You are then presented with a list of database schemas within that data source (see Figure 7-3). Each schema may be expanded to view all of its tables, views and stored procedures. Excel data sources will show a blank schema and, when expanded, will show all its named ranges.

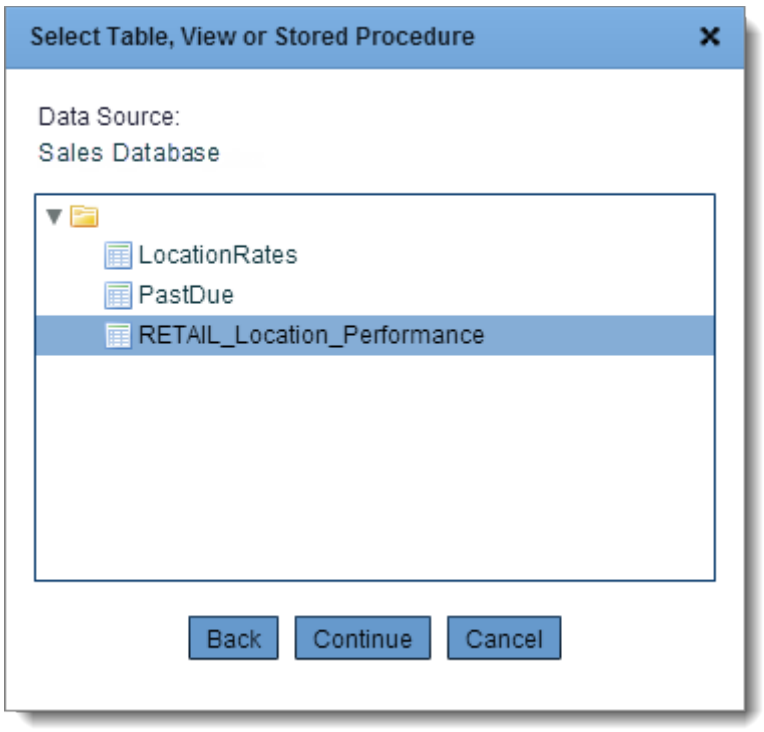

Figure 7-3

Select the table, view or stored procedure you would like to use and click “Continue”.

7.3 Selecting the Data Columns

The next window, called **Chart Data Columns**, allows you to associate the chart labels you entered in Section 7.1 with the data columns from the table, view or stored procedure you selected in Section 7.2 (see Figure 7-4).

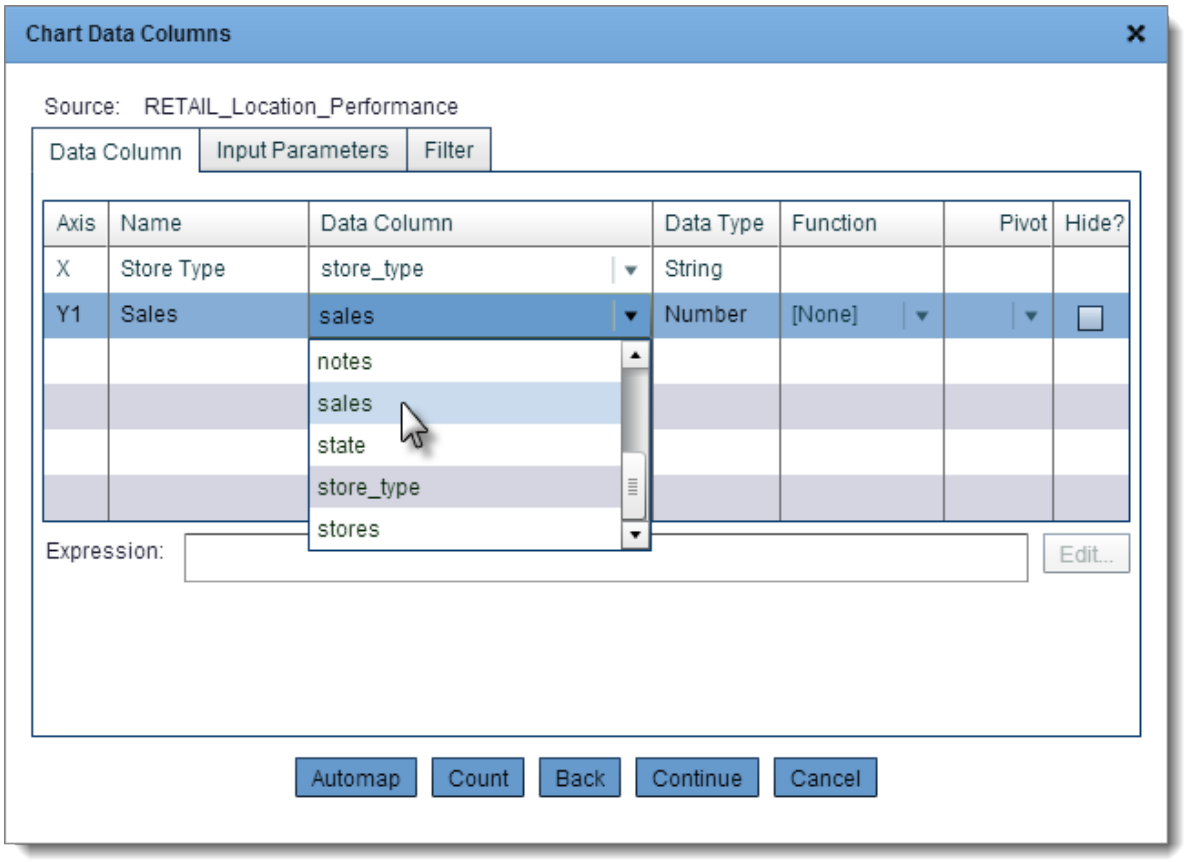

Figure 7-4

The "Axis" and "Name" columns of the grid are the X and Y labels typed during the earlier step. The "Data Column" column is a dropdown with the available columns in the selected table, view or stored procedure. Select the data columns using the dropdown that you want associated with each label. You must associate a data column with each label. The "Data Type" column will be automatically chosen by iDashboards to represent one of three data types: String, Number or Datetime. iDashboards will examine the data type of the column that is selected in the "Data Column" and apply the most appropriate data type.

The "**Automap**" button will automatically map the logically named columns to the columns in the Excel spreadsheet using one of three methods.

1. By: Exact Name: Case insensitive exact name match.
2. By: Position: Corresponding column in the imported data.
3. By: Best Match: Computes the best match for the columns.

Note: *These methods can be useful but may not always be accurate. Please validate the mappings should you select the "Automap" feature.*

Note: Function, Pivot, Hide and Filter will be explained in Chapter 16, “Advanced Chart Features”. Input Parameters will be explained in Chapter 17, “Input Parameters”.

7.4 Selecting Chart Type

The Chart Properties… window presents the user with the final step before displaying a chart (see Figure 7-5). In this step, select the chart group on the left and the actual chart type on the right. Click the “OK” button.

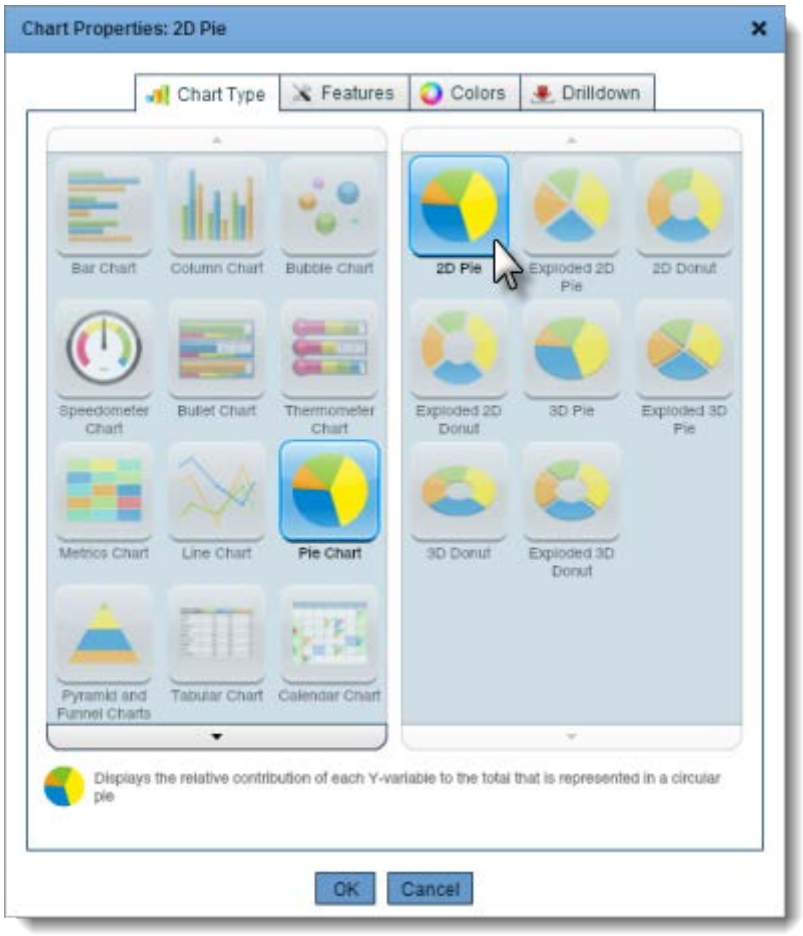

Figure 7-5

With the chart created, you may modify the chart type, chart colors and other chart display options. Details for making these changes are discussed in Chapter 10, “Chart Properties: Chart Features”.

7.5 Saving Charts

To save the chart you created, select the 'Save Chart As…' option from the right-click menu within the chart frame. Alternatively, click on the 'Save Chart As…' option within the Chart Menu of the chart's frame.

Clicking on the 'Save Chart As…' option opens a window with the option to choose a Category to save to. Only the Categories for which you have Save permissions (assigned by your iDashboards Administrator) will be displayed (see Figure 7-6).

Within the name input box, type the name of the chart as you want it to appear within the Category. The name can be no longer than 50 characters and is a required input. Note that chart names must be unique within a Category.

Within the title input box, type the title of the chart as you want it displayed on the chart itself. The title can be no longer than 50 characters and is optional to input.

Within the description input box, type the description of the chart as you want it displayed within the chart itself. The description is displayed when the mouse hovers over the title. The description field has a limit of 300 characters and it is optional to input.

***Note**: Dashboards and charts must be saved independent of one another. Therefore, if all the charts are saved but the dashboard is not, the dashboard will not open the charts the next time it is opened.*

7.5.1 Snapshot

The default option in the **Save Chart As** window is Dynamic Data Load. This implies that every time this chart is opened, it will load dynamic, real-time data from its data source.

If you select the Snapshot option, the data that is represented in the chart at the time the chart is saved will be saved along with the chart. Thereafter, every time the chart is opened this chart will display that static saved data and not a real-time dynamic data load from the database table or view.

***Note**: Some users find it more-safe to rename the chart while saving a Snapshot, so the original, dynamic chart is not overwritten.*

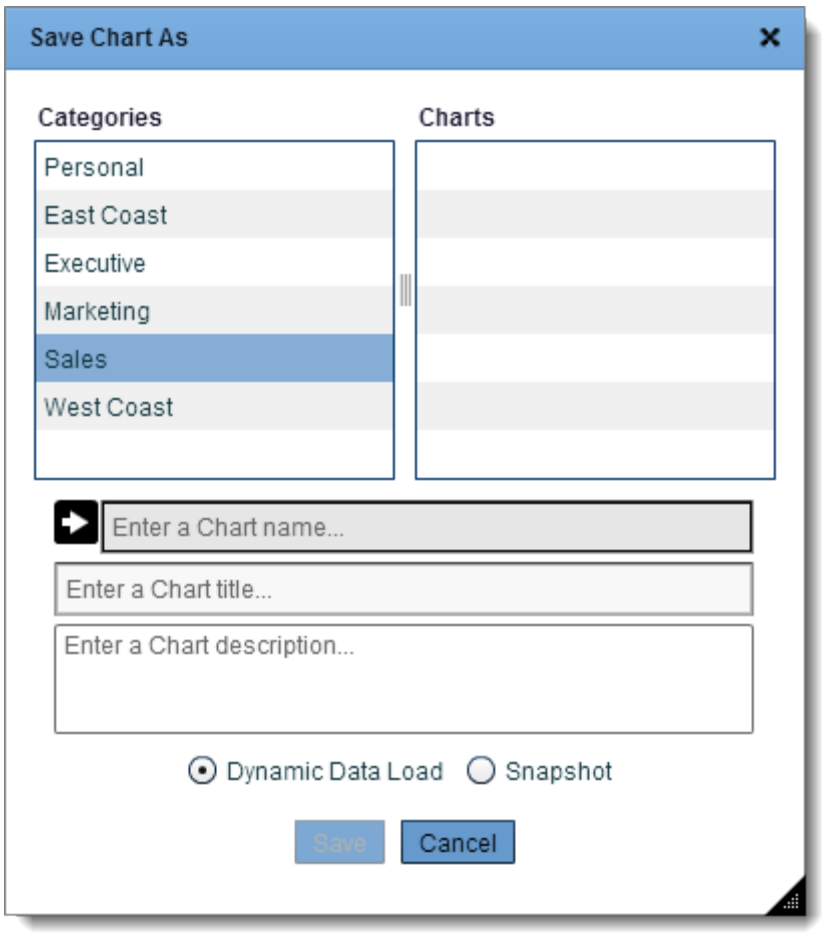

Figure 7-6

7.6 Custom Query

Section 7.2, “Selecting the Source Object” describes creating a dynamic chart by selecting a single database table, view or stored procedure. “Custom SQL” extends the functionality by providing the capability to specify a custom SQL query to retrieve the chart’s data. After you create the chart labels and click on “Import Data” button (see Figure 7-7), the **Chart Data Source** window will display the data sources with a ‘Custom SQL’ radio button at the top (Figure 7-8).

Figure 7-7

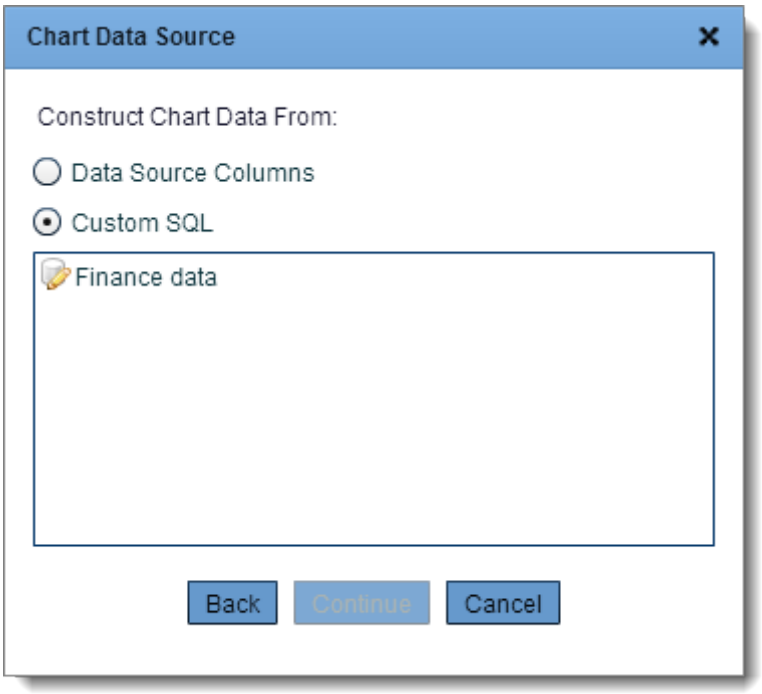

Figure 7-8

Upon clicking the “Custom SQL” radio button, you will see a list of the data sources that have been established by the iDashboards Administrator as databases that will allow custom SQL. Select the data source and then click the “Continue” button. The **SQL Query** window will appear providing you the ability to enter your custom SQL query (see Figure 7-9).

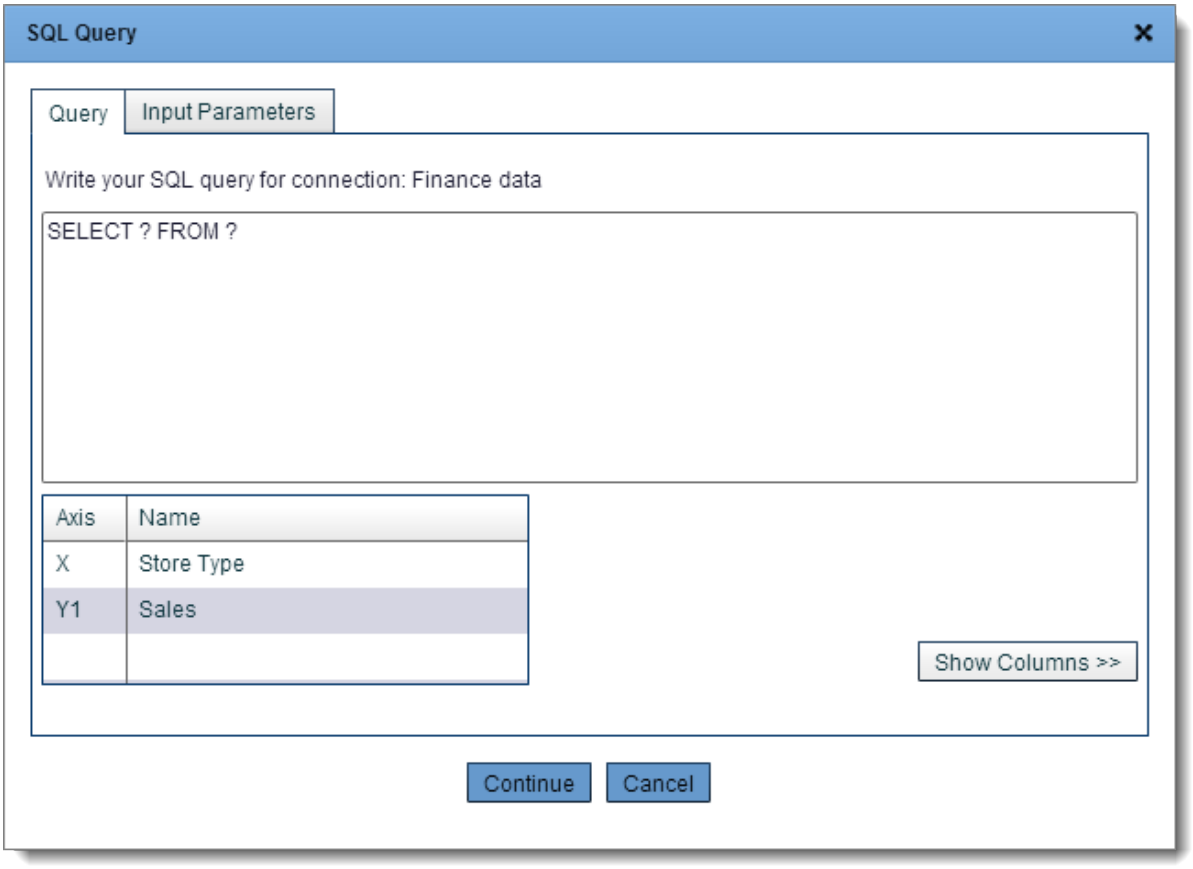

Figure 7-9

The “Show Columns” button at the bottom right of the **SQL Query** window allows you to see a list of tables and views, along with their associated columns, within the selected data source (see Figure 7-10). Double clicking any value in the list will populate the SELECT statement with that value. You may use the list to build your SQL statement or write it manually.

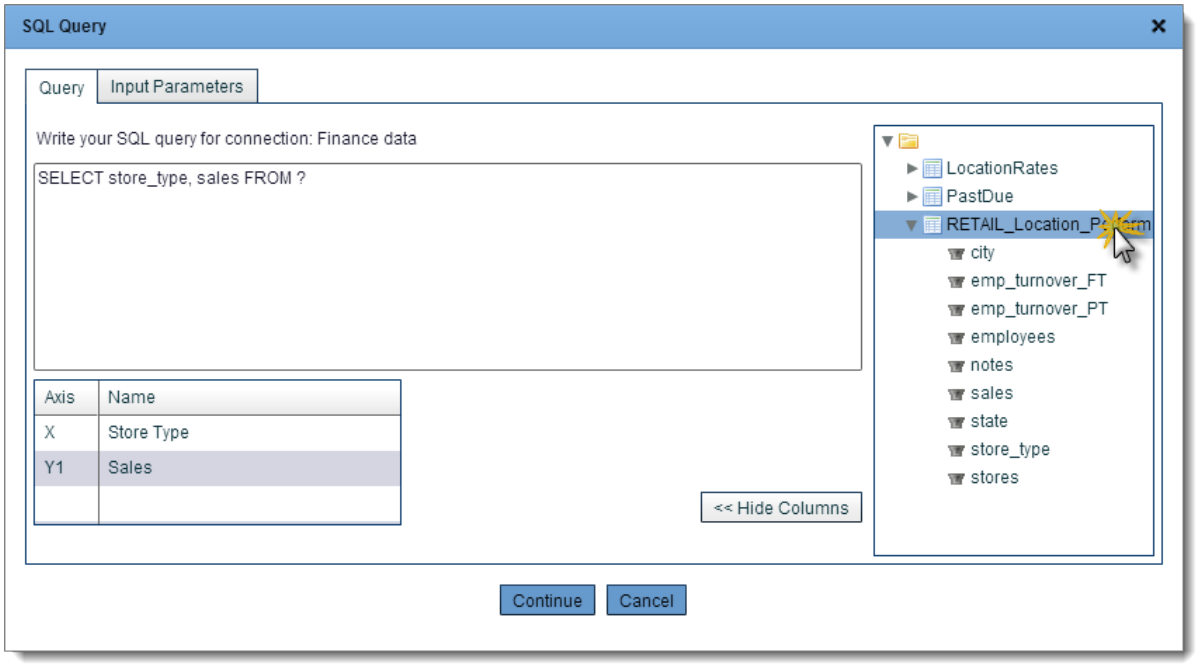

Figure 7-10

After completing the SQL query, click on "Continue" to display the **Chart Data Columns** window (see Figure 7-11).

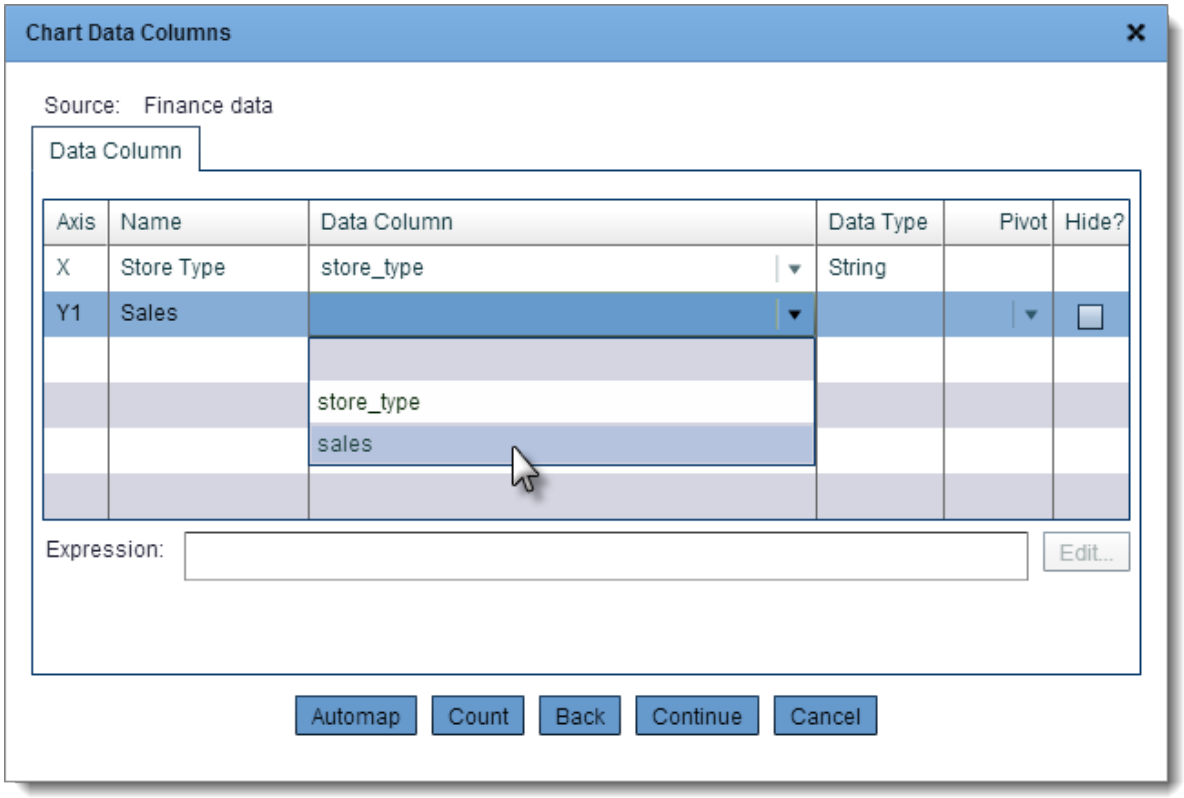

Figure 7-11

The “Axis” and “Name” columns of the grid are the X and Y labels typed during the earlier step. The “Data Column” column is a dropdown with the available columns and aliases from the SQL query. Select the data columns using the dropdown that you want associated to each of the labels. You must associate a data column to each label. The “Data Type” column will be automatically chosen by iDashboards to represent one of three data types: String, Number or Datetime. iDashboards will examine the data type of the column that is selected under the “Data Column” and apply the most appropriate data type.

Click on the “Continue” button to select a chart type and draw the chart with the data returned from the SQL query.

Note: *When creating Custom SQL queries, the use of fully qualified table names is encouraged. If wildcards are used to collect columns, changes in the table may result in a chart error (see* Figure 7-12 *for example). Charts with this error will require re-mapping between the Axis Name and Data Columns.*

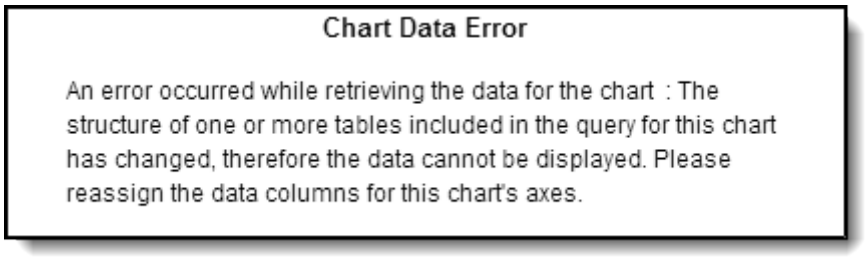
Chart Data Error
An error occurred while retrieving the data for the chart : The structure of one or more tables included in the query for this chart has changed, therefore the data cannot be displayed. Please reassign the data columns for this chart's axes.

Figure 7-12

7.7 Stored Procedures as a Data Source

A chart that uses a stored procedure as a data sources is created the same way as any other chart, with the addition of one extra step during chart creation. The additional step allows the user to enter any input arguments the stored procedure expects. To accommodate this, there is an Arguments tab added to the **Chart Data Columns** window when the data source is a stored procedure. For every input argument the stored procedure expects, there will be a row with the ‘Name’ of the input argument and a textbox where the user can enter the input argument values (see Figure 7-13).

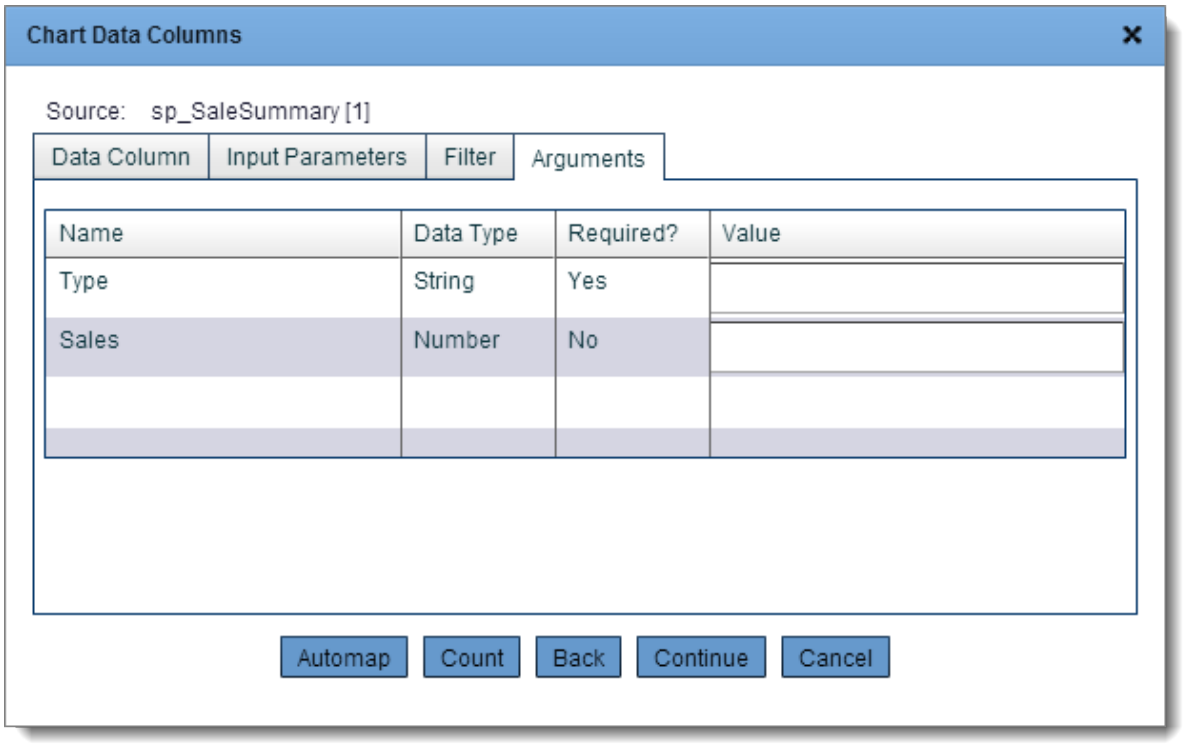

Figure 7-13

7.7.1 Using a Macro as an Argument

There are a number of macros that can be used as input arguments for a stored procedure; `${user}`, `${value:<Axis Name>}`, or any of the date macros (or their derivations) listed in Table 2. It is assumed the stored procedure was written to expect the macro data type.

Date Macros		
${ds} ${ts} ${currdate} ${currdate-30} ${currdate+30} ${currdate+90,"MMMM dd, yyyy"} ${currmonth} ${currmonth-3} ${currmonth+5} ${currmonth, "MM"}	${currmonth, "MMM"} ${currmonth, "MMMM"} ${currmonth + 2, "MMMM"} ${currmonth + 2, "MMMM d, yyyy"} ${currmonth:begin} ${currmonth:end} ${currmonth:end - 2} ${currmonth:begin + 3, "MMMM d, yyyy"} ${currmonth:begin + 3, "MMMM dd, yyyy"}	${curryear} ${curryear-3} ${curryear + 2} ${curryear + 2, "dd MMM yy"} ${curryear:begin} ${curryear:end} ${curryear:begin + 1, "dd MMM yy"}

Table 2

The `${user}` macro simply returns the username of the currently logged in user. Therefore, when a chart that uses this macro as an input argument is opened, the username of the current user is sent to the stored procedure as an input argument.

The `${value:<Axis Name>}` macro must be used in a chart that acts as a target chart for a drilldown (see Chapter 12, "Chart Properties: Drilldowns"). When a chart that uses this macro is opened, it will evaluate any drilldown parameters being sent to it for a parameter

called <Axis Name>. If it finds a parameter called <Axis Name>, the macro will return the value of the <Axis Name> parameter.

Note: *See Section 12.2, "Drilldown Parameters" for detailed information on passing parameters during drilldowns.*

Note: *See Section 16.5.2, "*Testing the Date Format*" for details on testing date macros.*

For example, let's take the case of a chart (source chart) that drills down to another chart (target chart) that uses a stored procedure as a Data Source. The source chart has an X-axis of "State" (see Figure 7-14). When a state value is clicked, such as "TX", "State" will be sent to the target chart as the parameter name and "TX" will be sent to the destination chart as the parameter value. The target chart will accept the drilldown parameter and, if the input argument uses macro as shown in Figure 7-15, then "TX" will be sent into the stored procedure. The stored procedure then accepts this argument, perform any actions on it (filtering in this example) and return a recordset to the chart. The chart will then render the data graphically (see Figure 7-16).

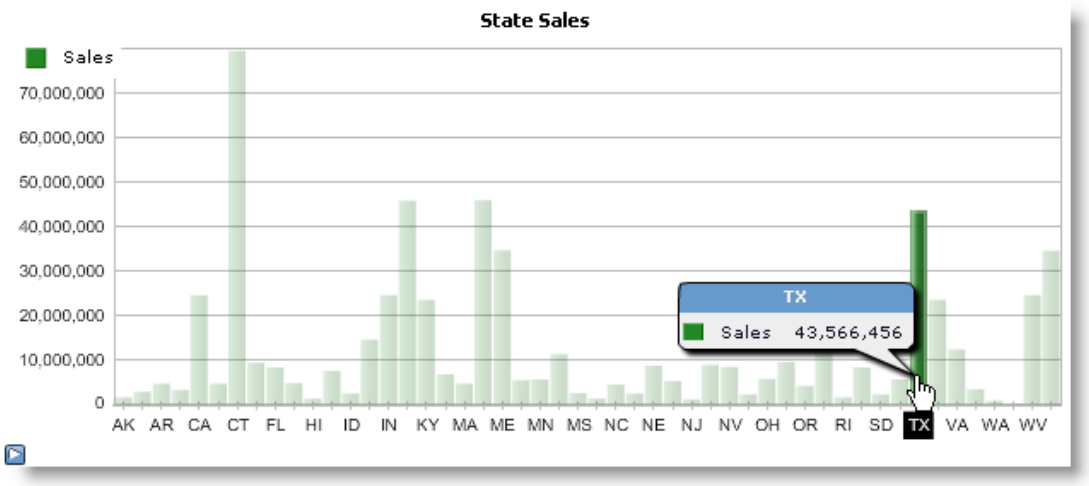

Figure 7-14

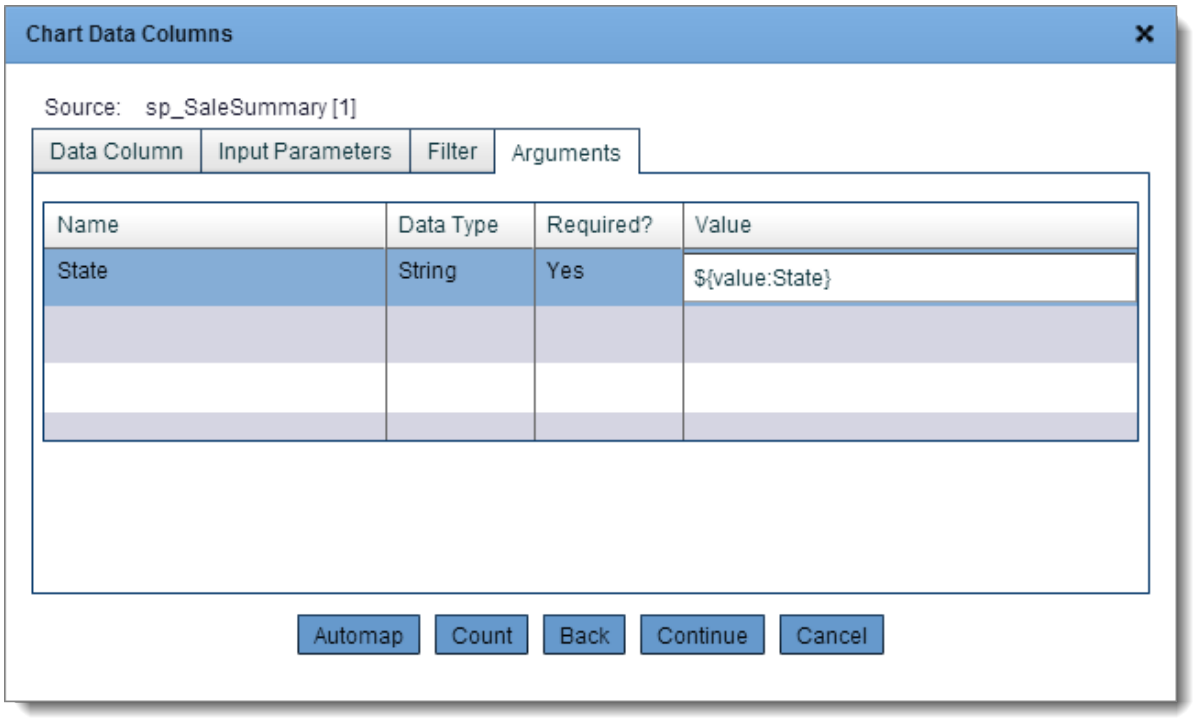

Figure 7-15

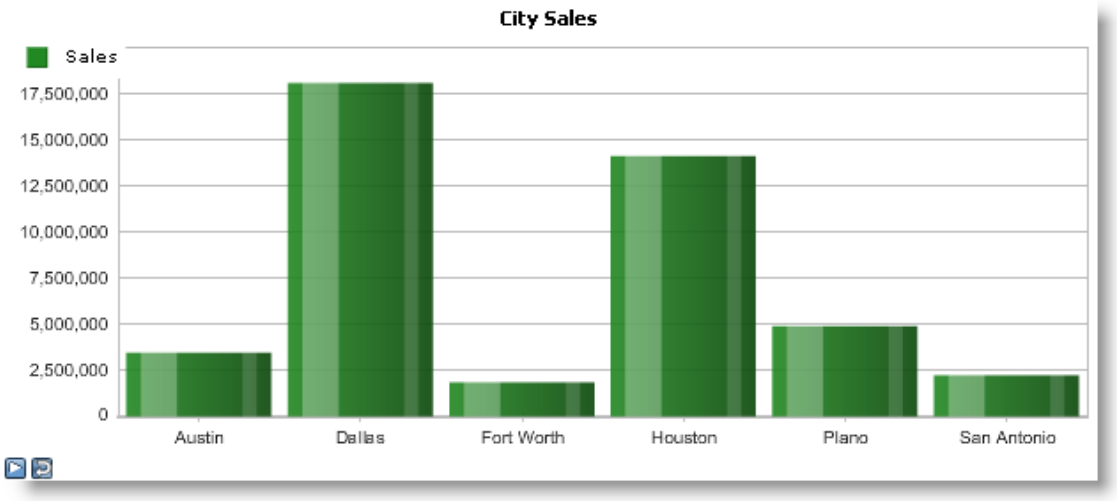

Figure 7-16

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8. Modifying Chart Data

After you have created a chart (using either method of static data or dynamic data), you can go back and change any of the data you entered or any of the settings you selected.

8.1 Manually Entered Data

To modify the data you entered or the settings you selected, right-click on the chart and choose "Chart Data…" Alternatively, you can select "Chart Data" from the Chart Menu. This will bring up the **Chart Data** window (see Figure 8-1). From here, you can choose to "Edit Axis Labels", "Upload Chart Data", "Modify Chart Data Column", "Edit Chart Data" or "Export Chart Data". Clicking any of these buttons will take you to a screen you configured during chart creation (except for export, which will simply allow you to export data). Refer to Chapter 6, "Creating Charts: Static Data" for detailed information on working with these screens.

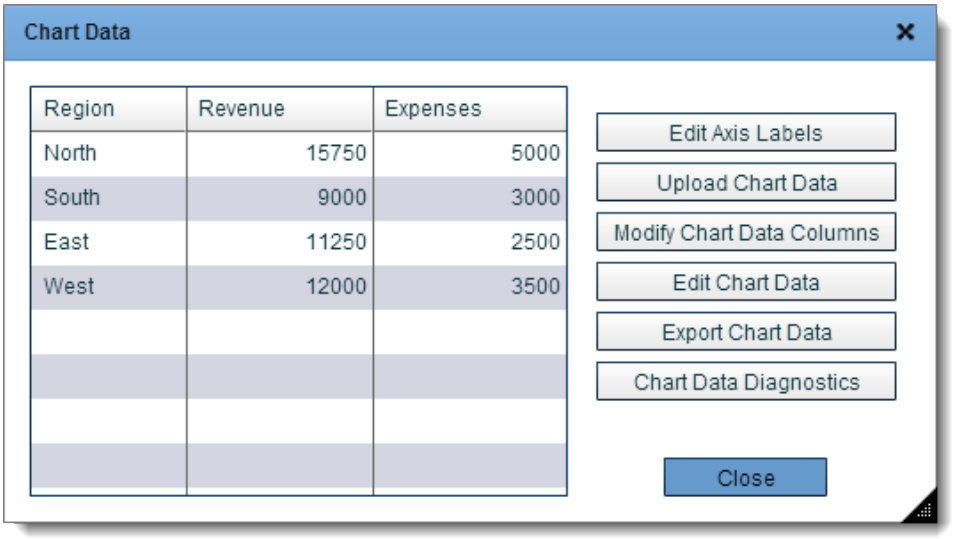


Figure 8-1

8.2 Dynamic Data

To modify the settings you selected, right-click on the chart and choose "Chart Data…" Alternatively, you can select "Chart Data" from the Chart Menu. This will bring up the Chart Data window (see Figure 8-2). From here, you can choose to "Edit Axis Labels", "Change Chart Data Source", "Modify Chart Data Column", "Modify Input Parameters", "Edit Chart Data" or "Export Chart Data". Clicking any of these buttons will take you to a screen you configured during chart creation except for export, which will simply allow you to export data. Refer to Chapter 7, "Creating Charts: Dynamic Data" for detailed information on working with these screens.

Note that if you choose to Edit Chart Data on a dynamic data chart, changes only persist in browser memory. Since the chart is getting its data from a dynamic data source, the data

that was input manually will be lost after a re-open or a refresh of the chart. The benefit to changing data on a dynamic chart is to temporarily explore alternative data values within a chart (see Figure 8-3).

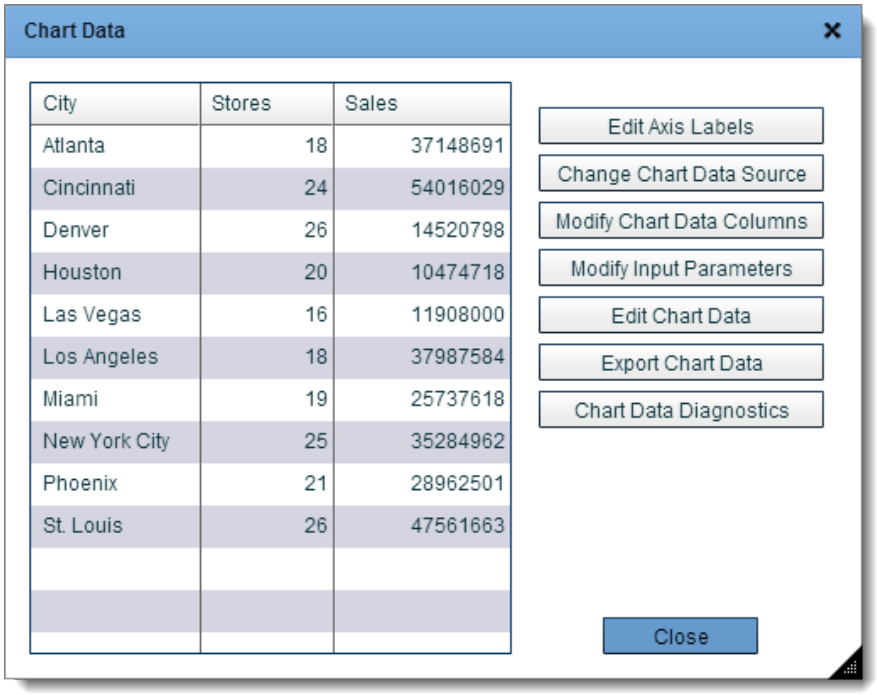


Figure 8-2

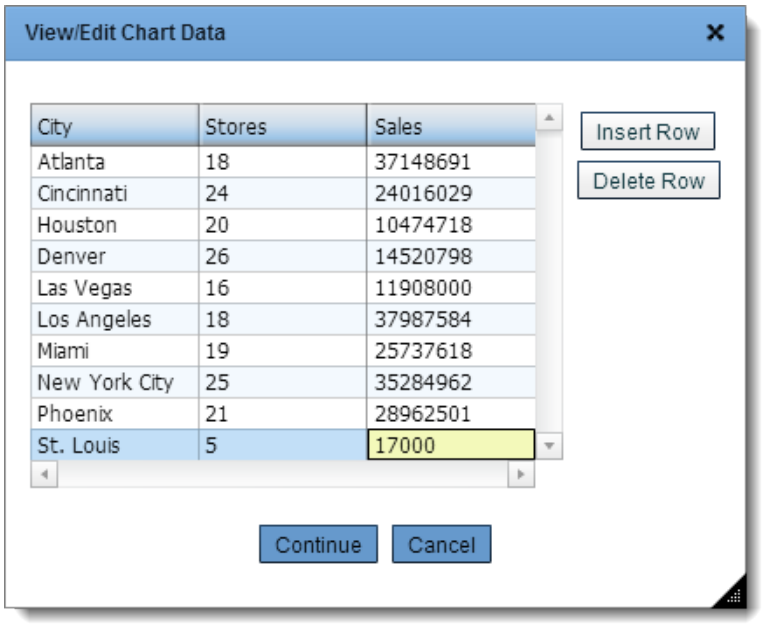


Figure 8-3

9. Chart Properties: Chart Types

To access the Chart Type options, right-click on a chart and select the 'Chart Properties…' option from the right-click menu. Then, from the Chart Properties window, select the 'Chart Type' tab. Alternatively, click 'Chart Properties > Type…' from the Chart Menu button of the desired frame. Chart types are organized into groups on the left and each chart group may have several chart types on the right (see Figure 9-1).

Figure 9-1

9.1 Bar Charts

- **Clustered Bar** - Each Y-variable is drawn as a colored horizontal bar. Compares Y-values across multiple Y-variables (see Figure 9-2).

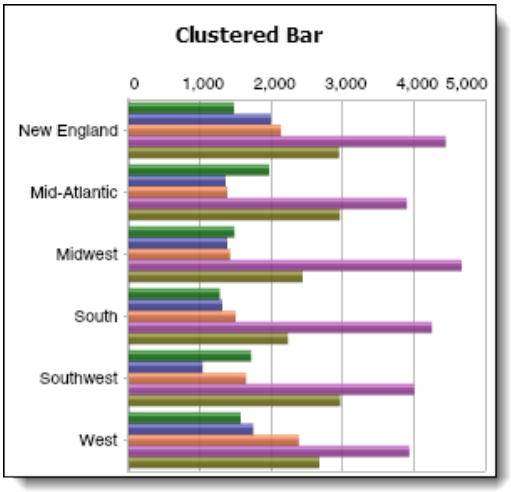


Figure 9-2

Note: *The 'Show Bar Gradient' option is available on the Clustered Bar Chart. This option allows for the bars to display with a variety of gradient options.*

- **Stacked Bar** - Each Y-variable is drawn as a colored stack on a multicolor horizontal bar. Compares the contribution of each Y-variable to a total across multiple Y-variables (see Figure 9-3).

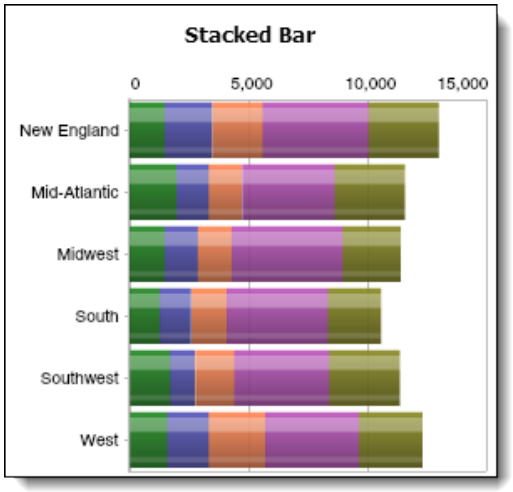


Figure 9-3

- **Ratio Bar** - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a stacked horizontal column (see Figure 9-4).

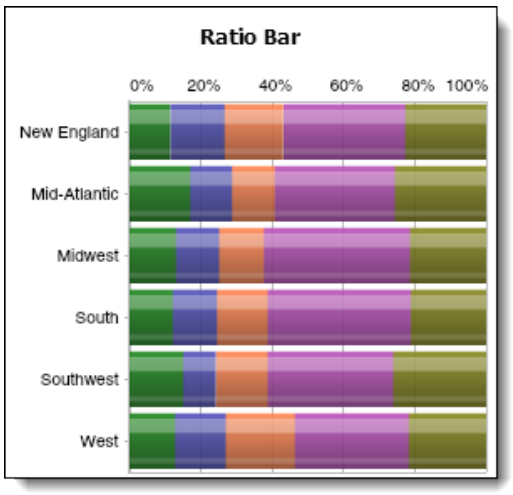


Figure 9-4

Note: *The 'Use Mixed Y-Axis Ranges' option is available on the Clustered Bar Chart. This option allows for the graph to plot the values in their proportions. For example the values 100, 200, and 300 would plot the same as 10, 20, and 30 since they have the same proportions. The 'Use Mixed Y-Axis Ranges' option on the Clustered Bar Chart will work only if three conditions are met:*

1. *The chart has more than one numeric Y value.*
2. *The 'Use Mixed Y-Axis Ranges' option is checked.*
3. *The 'Match Type' option in the basic setting (see Section 10.1.13, "Match Type" for more information) is set to "Y Axis Name".*

- **Population Distribution** - Displays distribution of various groups in a population, with horizontal bars comparing two numeric Y axes against a common X axis (see Figure 9-5).

Figure 9-5

The first numeric Y axis found will be displayed on the left; the second numeric Y axis found will be displayed on the right. Unlike some other charts, this chart will not graphically display a third (or more) numeric axis. Instead the additional axes will only display in the mouse-over legend.

9.1.1 Gantt

Graphically illustrates the start and end dates of tasks within a project (see Figure 9-6).

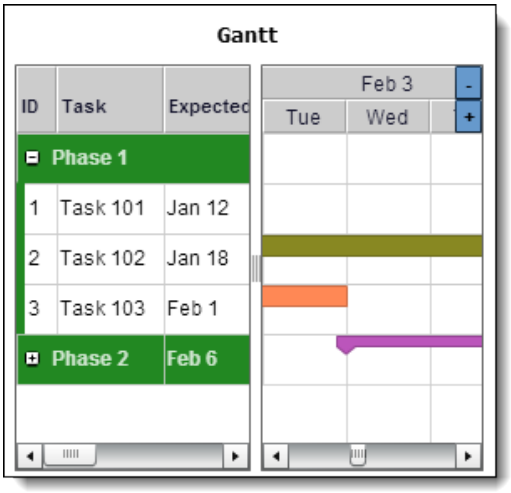


Figure 9-6

Gantt charts are for project scheduling. Project details, like tasks or phases, can be visually interpreted to determine the expected/actual start and finish dates.

Gantt Data Requirements

- Like all iDashboards charts, one X and one Y axis are required. However, two Y Axes, as dates, are required for the Gantt chart to display a period of time.

- The first Y-axis containing dates should always be a date which precedes the second Y-axis date.

Example Data Structure #1

Task	Expected Start	Expected End	Actual Start	Actual End	…
X-Axis	Y1-Axis	Y2-Axis	Y3-Axis	Y4-Axis	…
Task 1	01/01/2013	06/01/2013	02/01/2013	11/01/2013	
Task 2	02/22/2013	08/08/2013	03/22/2013	05/01/2013	
Task 3	10/10/2013	12/30/2013	12/01/2013	12/15/2013	

Example Data Structure #2

Task	Division	Team	Expected Start	Expected End	…
X-Axis	Y1-Axis	Y2-Axis	Y3-Axis	Y4-Axis	…
Task 1	X	A	01/01/2013	06/01/2013	
Task 2	X	A	02/22/2013	08/08/2013	
Task 3	X	B	05/01/2013	05/10/2013	
Task 4	Y	C	05/01/2013	07/01/2013	
Task 5	Y	D	10/10/2013	12/30/2013	

9.1.2 Example Gantt Solution #1

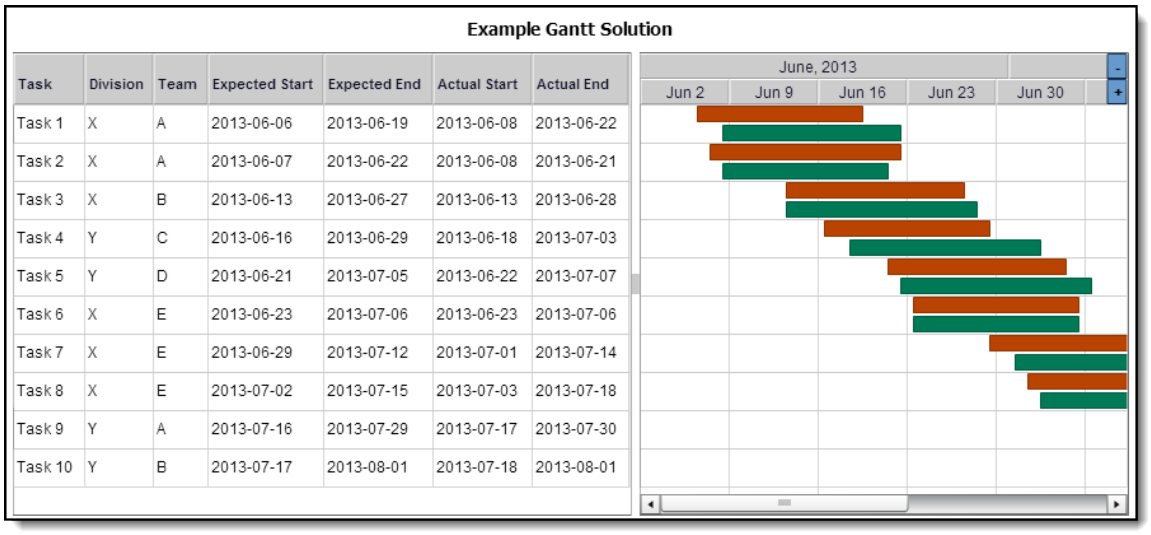
This section includes a progressive concept explaining one example for developing a Gantt chart within iDashboards. The data assumes 10 tasks, 2 corporate divisions, and 5 teams. All tasks were completed because the last task has a populated 'Actual End' date. The goal is to develop a Gantt chart which is capable of displaying each task detail, along with grouping options at the Division and Team level.

Data:

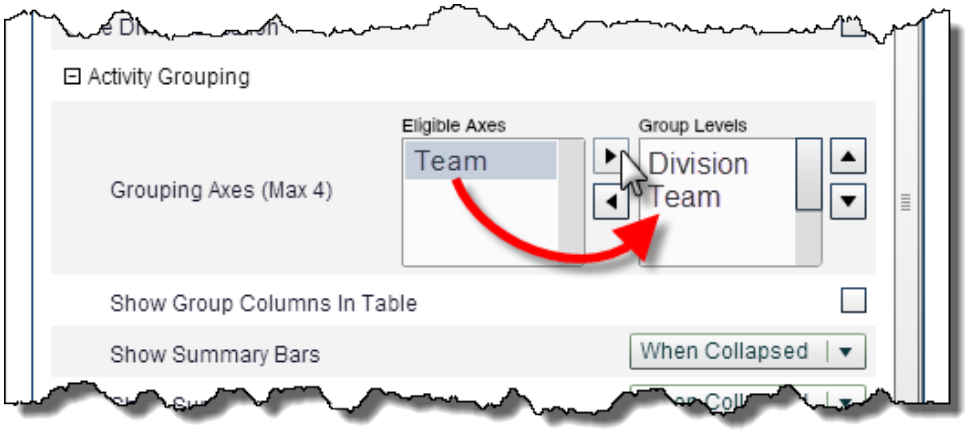
X-Axis	Y1-Axis	Y2-Axis	Y3-Axis	Y4-Axis	Y5-Axis	Y6-Axis
Task 1	X	A	6/6/2013	6/19/2013	6/8/2013	6/22/2013
Task 2	X	A	6/7/2013	6/22/2013	6/8/2013	6/21/2013
Task 3	X	B	6/13/2013	6/27/2013	6/13/2013	6/28/2013
Task 4	Y	C	6/16/2013	6/29/2013	6/18/2013	7/3/2013
Task 5	Y	D	6/21/2013	7/5/2013	6/22/2013	7/7/2013
Task 6	X	E	6/23/2013	7/6/2013	6/23/2013	7/6/2013
Task 7	X	E	6/29/2013	7/12/2013	7/1/2013	7/14/2013

Task 8	X	E	7/2/2013	7/15/2013	7/3/2013	7/18/2013
Task 9	Y	A	7/16/2013	7/29/2013	7/17/2013	7/30/2013
Task 10	Y	B	7/17/2013	8/1/2013	7/18/2013	8/1/2013

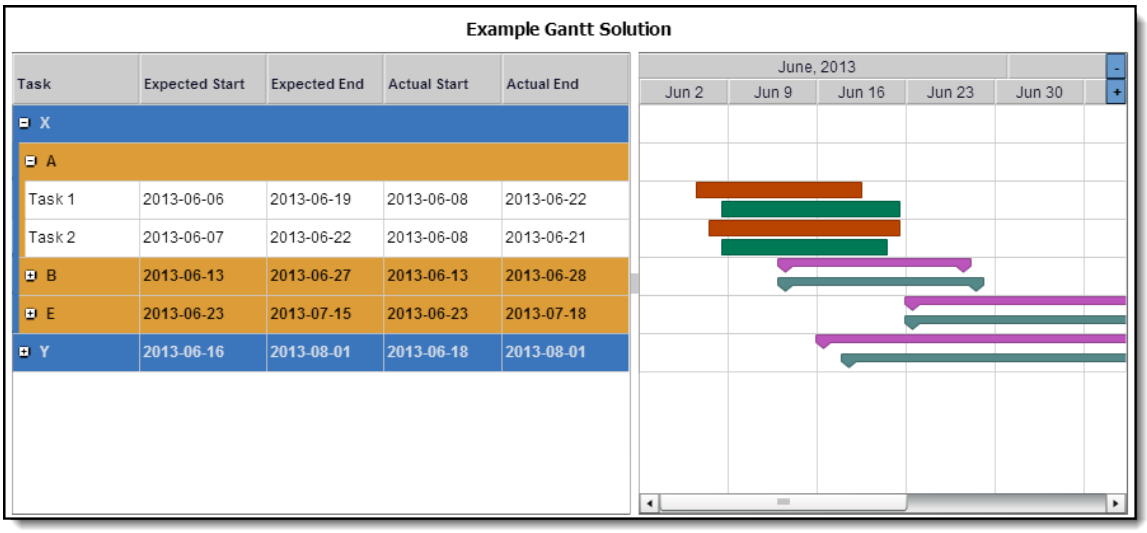
Default Chart:



Update Chart Properties:



Final Chart:



Gantt Description

Gantt charts illustrate the period of time, from start to finish, for completing a task. This chart is divided vertically into two components. The left half displays tabular data and the right half displays horizontal, graphical bars along a timeline. Each X-axis value is represented as a row (task) and the horizontal bar will illustrate length of time between the start and finish date for each task.

Using two Y-Axes: If Y1 represents the expected start date for a task then Y2 should represent the expected end date. If an additional Y3 & Y4 are added to communicate actual start and end dates, then each task will display two horizontal bars. The pattern of 'pairing dates' can continue an unlimited number of times. However, the first pair is specifically designated as the expected period of time.

By default, a vertical line appears at the 'Current Date' under the 'Data Date Line' settings. If there is an unpaired Y-axis containing dates, the vertical line can appear in a different location. The data structure to support this axis is non-typical and doesn't follow the traditional tabular-data format. iDashboards will locate the first date (querying from the top-down) to position the date line. Therefore, it may be necessary to organize data in a particular format for this column. If the Data Date Line is not unpaired, then a specific label name can be used to leverage this feature. The Axis Label must begin with the word "data" followed by an optional: space, hyphen, or underscore and followed by the word "date" (case-insensitive), and lastly followed by optional characters. Ex: "DATA_DATE", "datadate", "Data-date For admin". The label must also be hidden during the setup of 'Chart Data Column'.

Milestones exist when the start date and finish date are identical.

If a data column contains additional data which groups the tasks together, the chart builder has multiple options to summarize and group tasks. Grouped tasks will display a horizontal summary bar with visual arrows at each end.

The color of each horizontal bar can be adjusted by customizing the start date axes. For example, Y1 (expected start) and Y2 (expected end) are paired dates which display as one horizontal bar. Editing the start date (Y1 axis) color will change the color of that bar. If the summary bars are enabled, the colors can be adjusted by changing the end date (Y2 axis).

9.2 Column Charts

- **Clustered Column** - Each Y-variable is drawn as a colored Vertical bar. Compares Y-values across multiple Y-variables (see Figure 9-7).

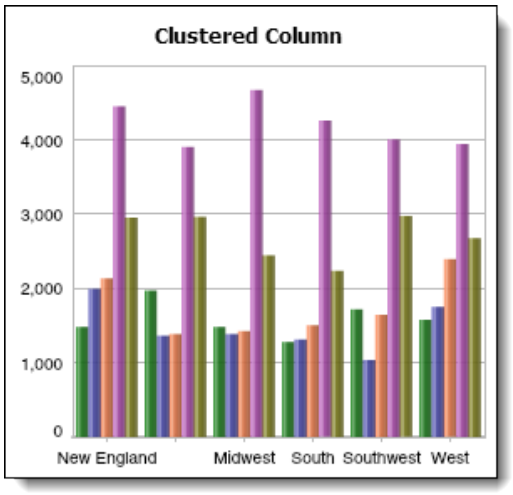


Figure 9-7

Note: *The 'Show Bar Gradient' option is available on the Clustered Column Chart. This option allows for the columns to display with a variety of gradient options.*

- **3D Column** - Each Y-variable is drawn as a colored 3D vertical column and arranged in a three-dimensional formation (note the dark tops to the columns indicate a negative value) (see Figure 9-8).

- **3D Cylinder** - Each Y-variable is drawn as a colored 3D vertical cylinder and arranged in a three-dimensional formation (see Figure 9-9).

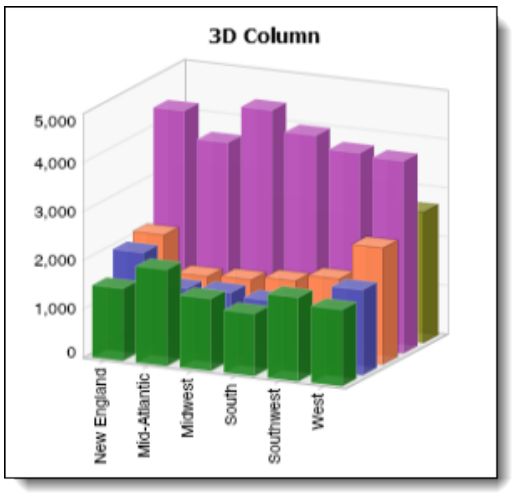


Figure 9-8

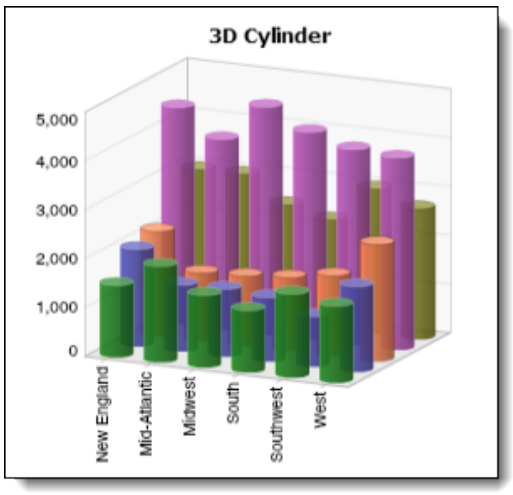


Figure 9-9

- **Stacked Column** - Each Y-variable is drawn as a colored stack on a multicolor Vertical bar. Compares the contribution of each Y-variable to a total across multiple Y-variables (see Figure 9-10).
- **Stacked with Line** - Each Y-variable is drawn as a colored stack on a multicolor vertical column with the last y-variable(s) plotted as line(s) on a separate scale (see Figure 9-11).
- **3D Stacked Column** - Each Y-variable is drawn as a colored stack on a multicolor vertical 3D column (see Figure 9-12).
- **3D Stacked Cylinder** - Each Y-variable is drawn as a colored stack on a multicolor vertical cylinder (see Figure 9-13).

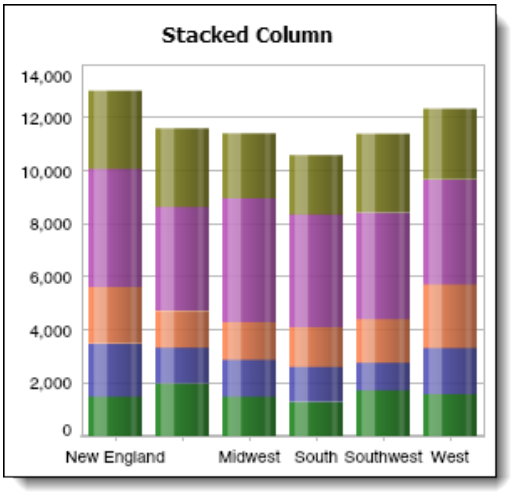


Figure 9-10

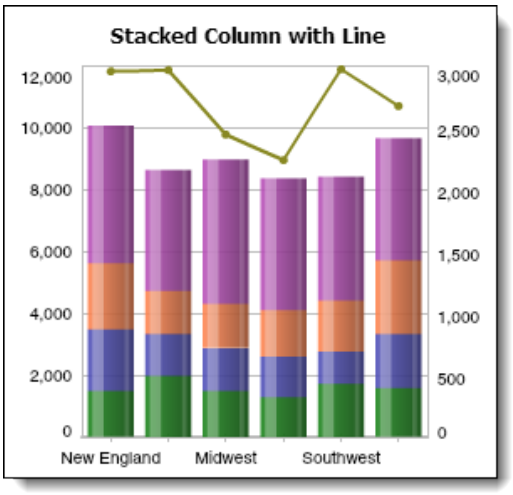


Figure 9-11

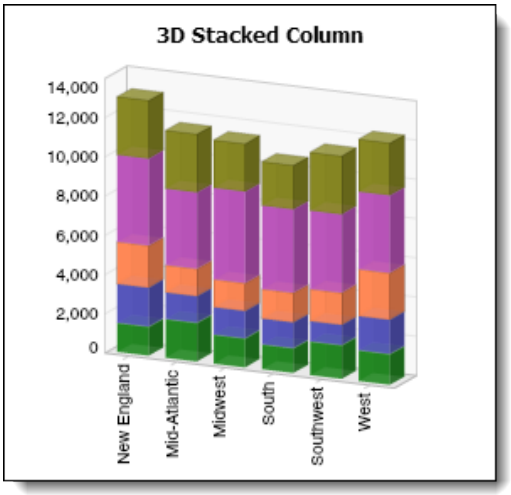


Figure 9-12

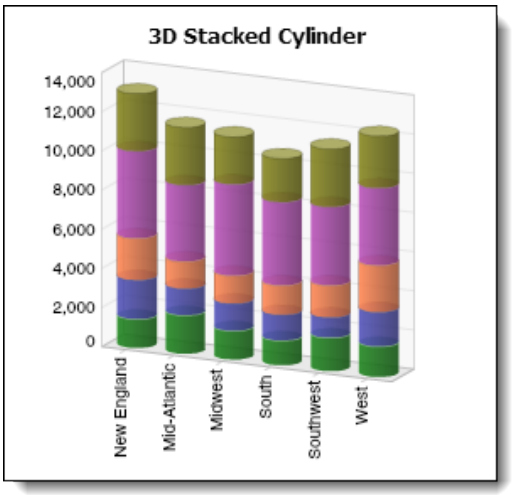


Figure 9-13

- **Ratio Column** - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a stacked vertical column (see Figure 9-14).
- **3D Ratio Column** - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a stacked vertical 3D column (see Figure 9-15).
- **3D Ratio Cylinder** - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a stacked vertical cylinder (see Figure 9-16).

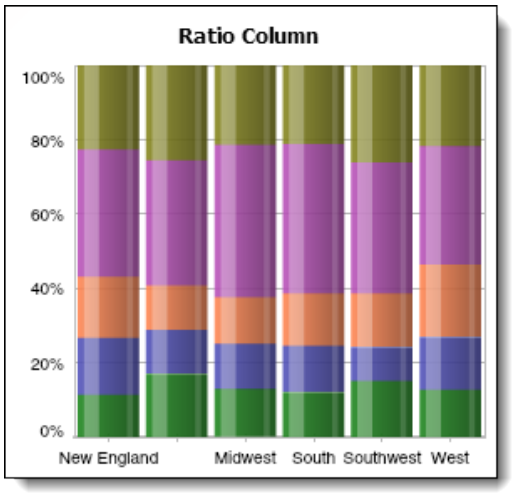


Figure 9-14

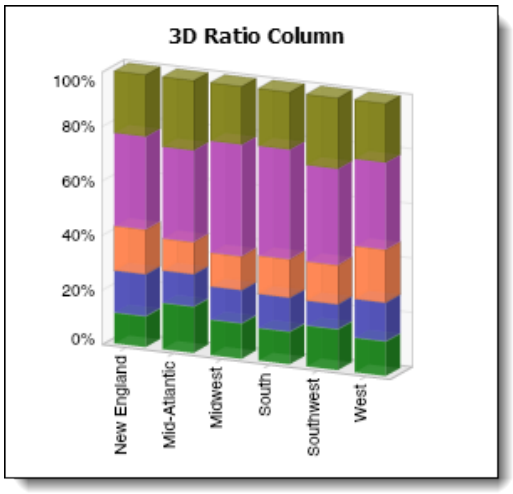


Figure 9-15

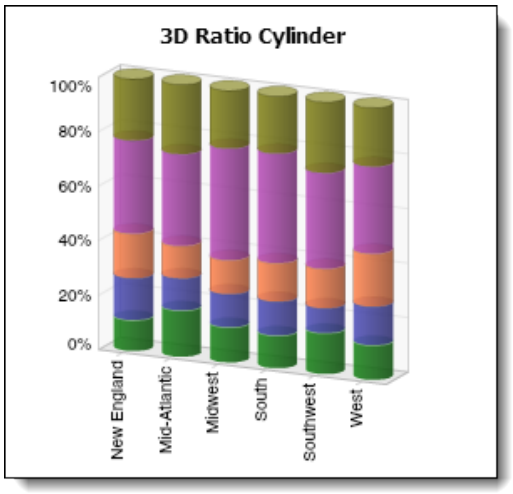


Figure 9-16

- **Pareto Column** - A special type of histogram, arranged in order of severity from largest to smallest, reflecting the frequency or impact of entities. The line indicates cumulative percentage. User specified sort order will be ignored for this chart type, as Pareto data items are arranged from largest to smallest. The left-side vertical axis will display the values of the individual entity. The right-side vertical axis will always be the cumulative percentage from 0 to 100% (see Figure 9-17). The vertical dashed line represents the user-defined breakpoint.

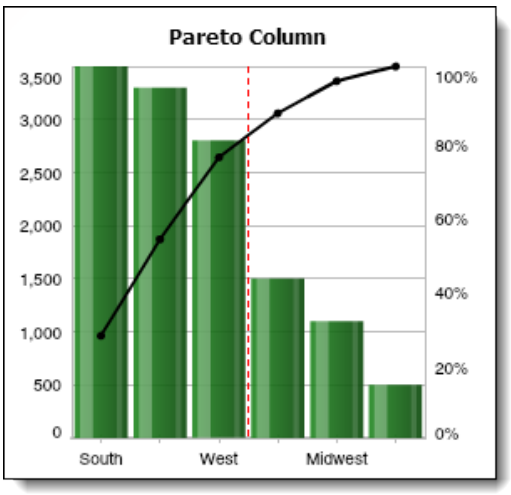


Figure 9-17

- **Column with Line** - Clustered column chart with last Y-variable plotted as a line on a separate scale that is drawn on the right vertical axis (see Figure 9-18). The last Y-axis is represented with a line rather than a column. The user can control how many columns should be displayed as lines. The first Y-axis displayed as a column must remain a column and cannot be displayed as a line. However, if all axes need to be a line, the user can change the chart type to a Line Chart.

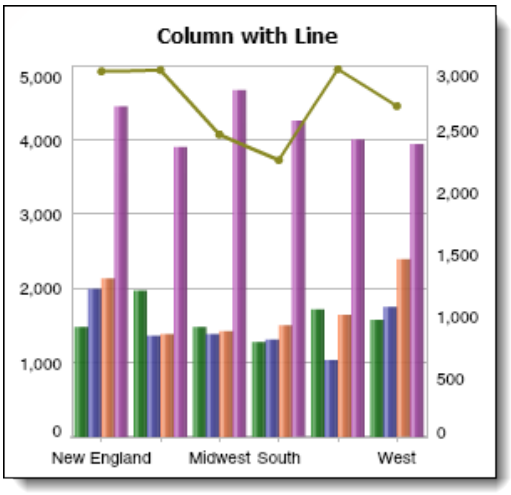


Figure 9-18

- **Sparkcolumn** - Variations of each Y-variable are represented in individual column charts, stacked into a simple and condensed chart (see Figure 9-19).

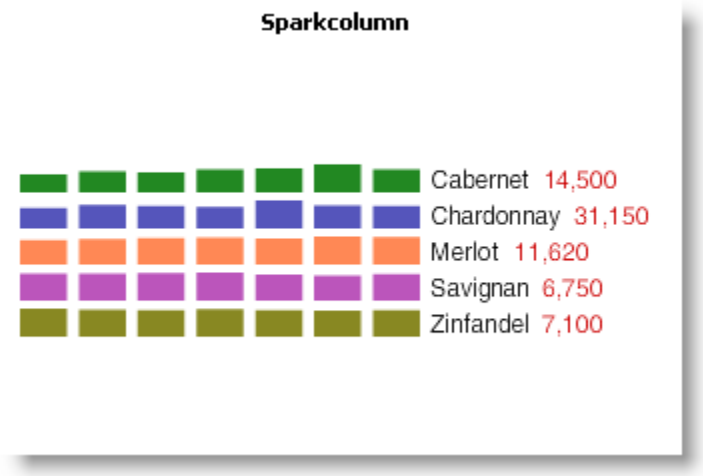


Figure 9-19

9.3 Bubble Charts

- **Bubble Chart** – Each bubble is an intersection of two measures, and a third measure determines the size of the bubble. Each bubble is displayed as a 3D sphere. However, if the chart has only two measures (2 sets of Y-variables), then all the bubbles are identical in size. The location of each bubble is determined by the intersection of the two measures (see Figure 9-20).

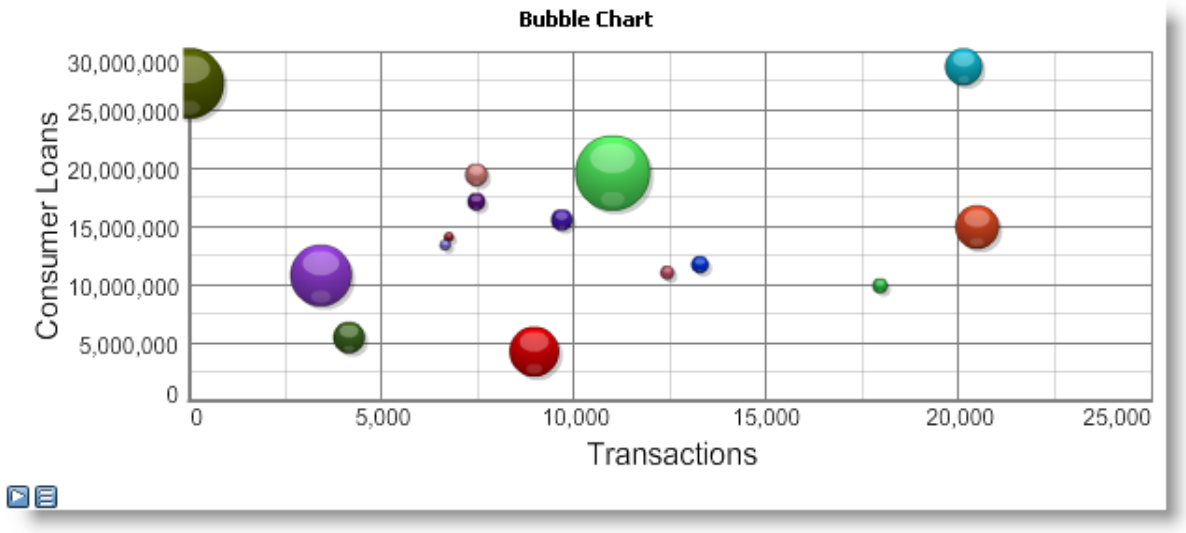


Figure 9-20

9.4 Speedometer Charts

- **Half Speedometer** - Each Y-variable is displayed as an animated needle on a half-round speedometer (see Figure 9-21).

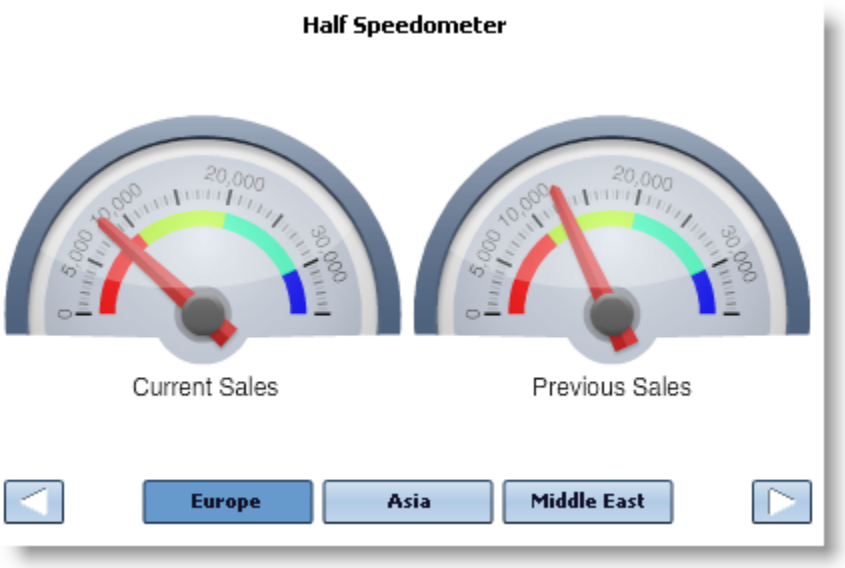


Figure 9-21

- **Half Speedometer with Odometers** - The first Y-variable is displayed as an animated needle on a half-round speedometer and the rest of the Y-variables are displayed in an odometer like interface (see Figure 9-22).

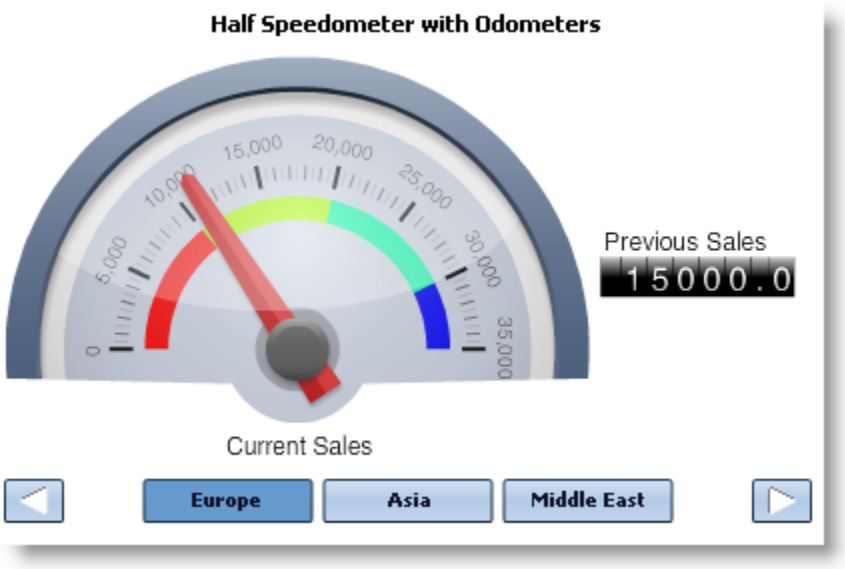


Figure 9-22

- **Full Speedometer** - Displays through an animated needle the value of each Y-data point in a full round Speedometer interface. Features include ability to change dial, needle and text colors besides the colors and thresholds for the displayed scale within each speedometer (see Figure 9-23).

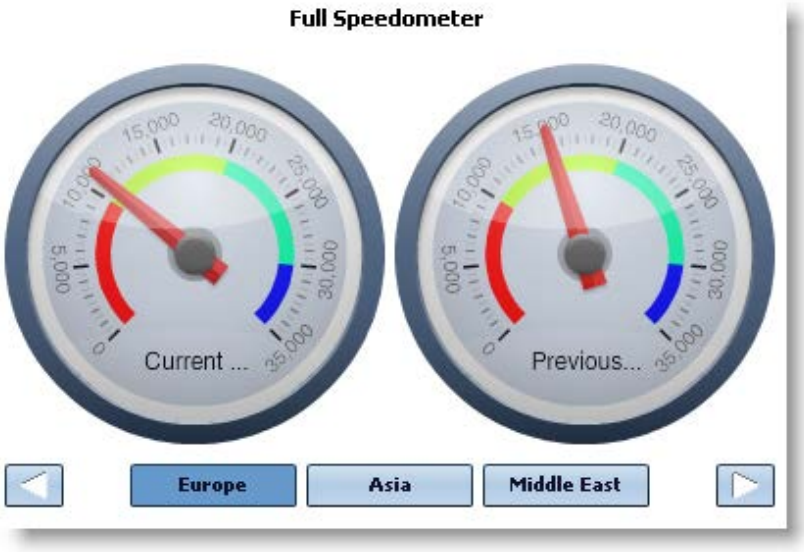


Figure 9-23

- **Full Speedometer with Odometers** - Displays through an animated needle the value of first Y-data point in a Speedometer interface. Remaining Y-data points are displayed as text on the right side of the speedometer. The text and speedometer needle animate with any change of an x-value due to cursor location (see Figure 9-24).

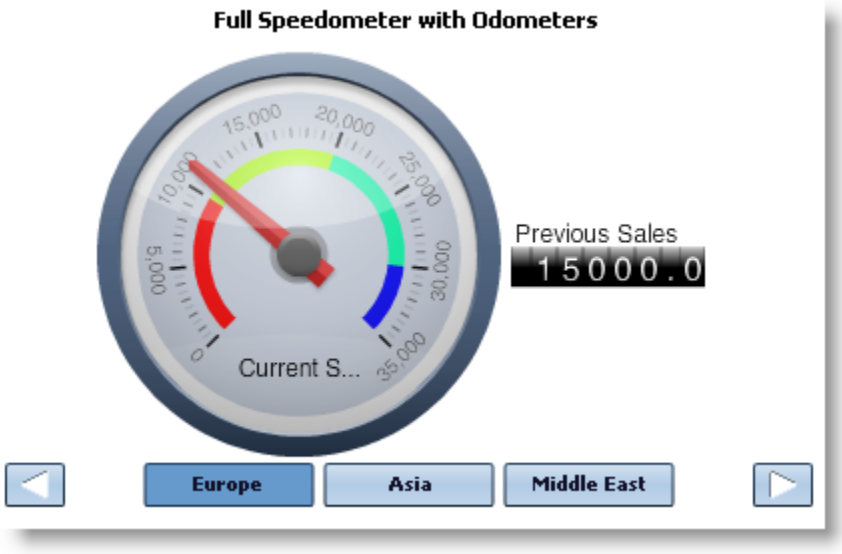


Figure 9-24

- **Square Speedometer** - Y-variables are displayed as an animated needle on a square speedometer (see Figure 9-25).

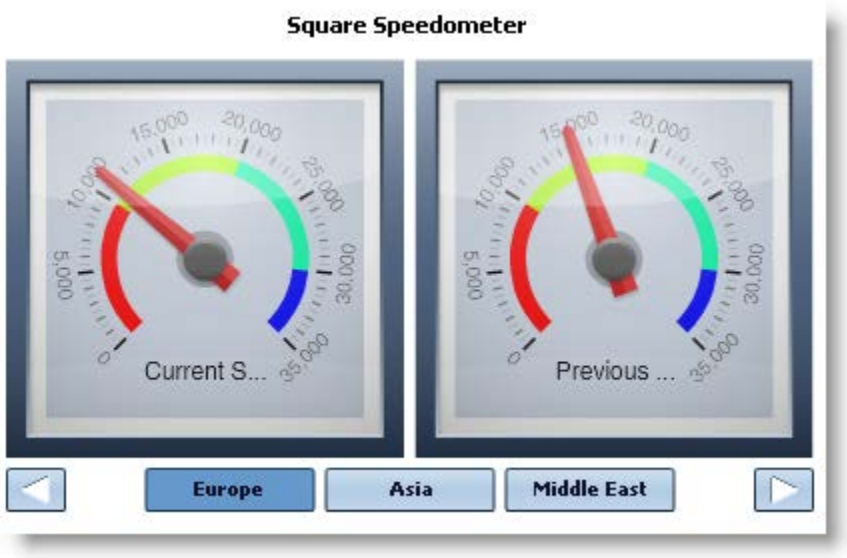


Figure 9-25

- **Square Speedometer with Odometers** - Specified number of Y-variables is displayed as an animated needle on a square speedometer and the rest of the Y-variables are displayed in an odometer-like interface (see Figure 9-26).

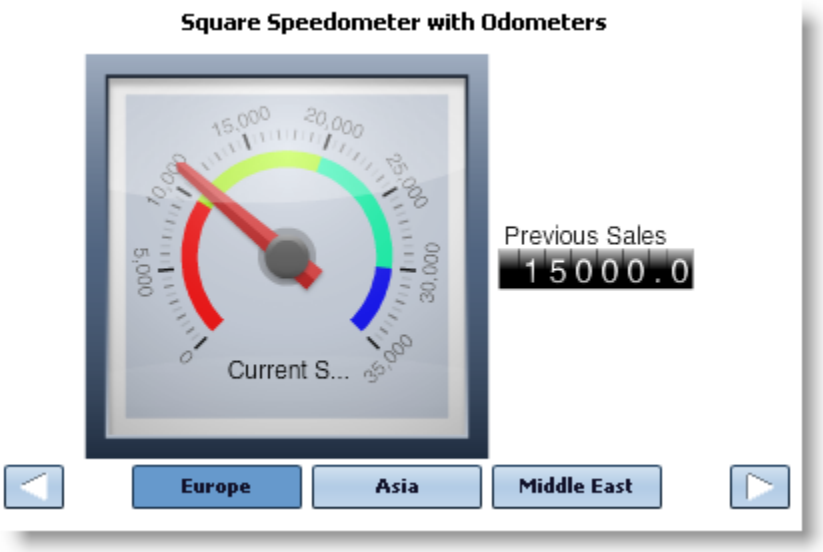


Figure 9-26

- **Target Speedometer** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, sixth, etc. Y-variables as percentages of those targets, respectively in horizontal thermometer gauges (see Figure 9-27).

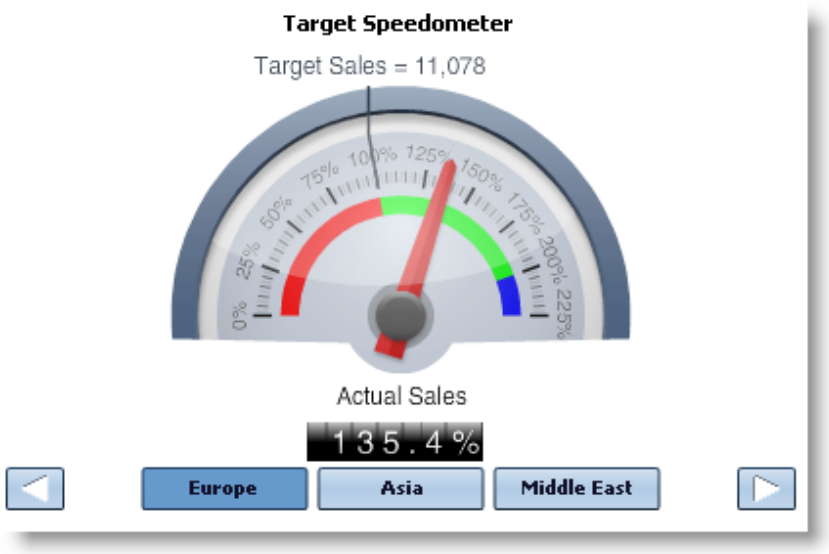


Figure 9-27

- **Cluster-2 Speedometer** - Y-variables are displayed as an animated needle on a full speedometer with an inner speedometer (see Figure 9-28).

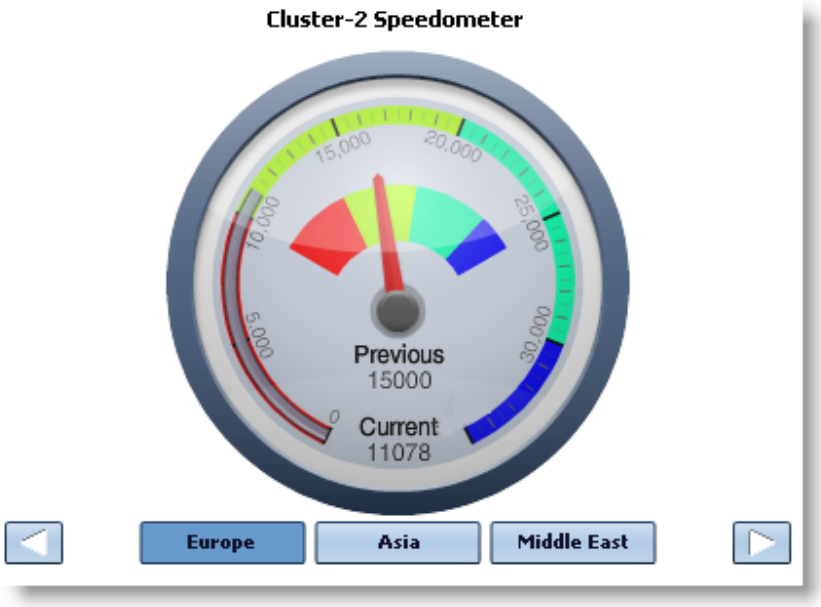


Figure 9-28

- **Cluster-3 Speedometer** - Y-variables are displayed as an animated needle on a full speedometer with two inner speedometers (see Figure 9-29).

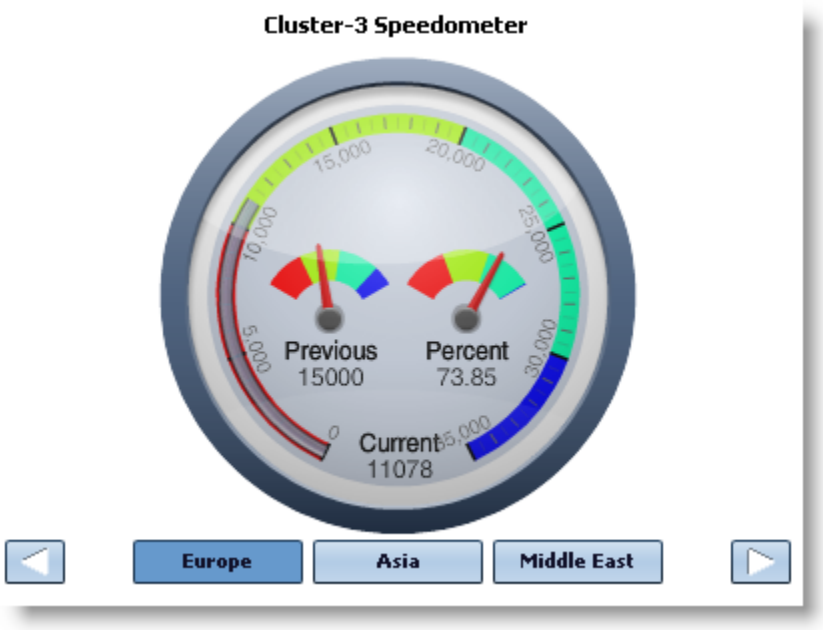


Figure 9-29

- **Cluster-4 Speedometer** - Y-variables are displayed as an animated needle on a full speedometer with three inner speedometers (see Figure 9-30).

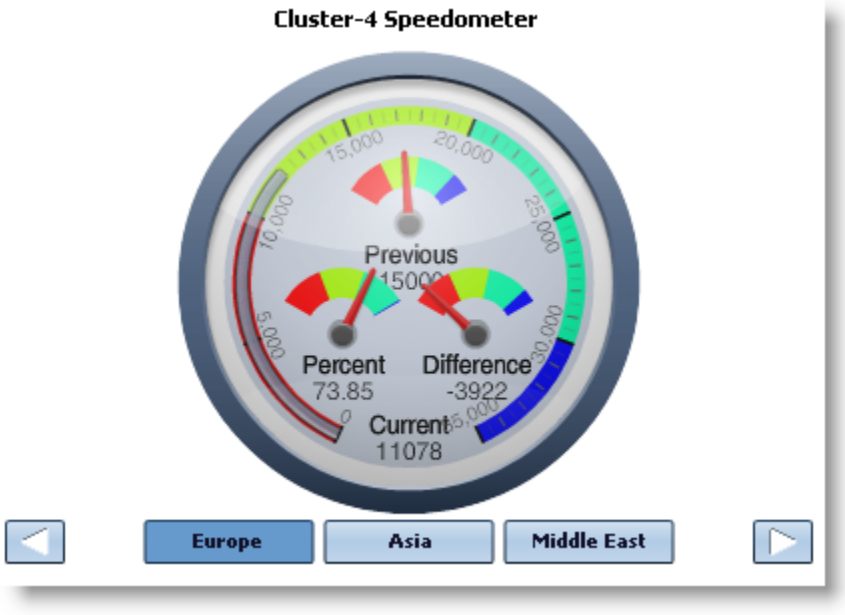


Figure 9-30

- **Custom Speedometer** - Y-variables are displayed as an animated needle with a variety of speedometer face, border, shape, needle and meter options (see Figure 9-31).

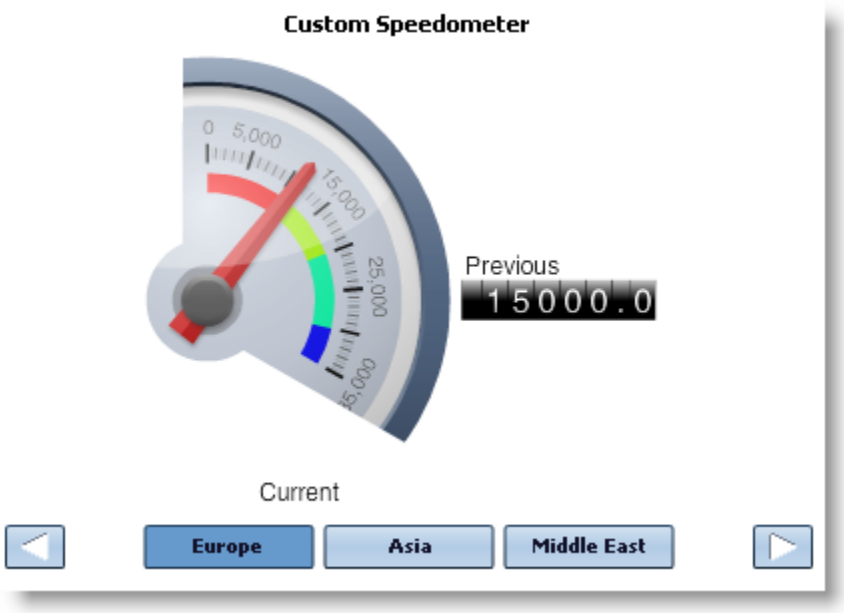


Figure 9-31

- **Multi-needle Speedometer** - Similar to the *Custom Speedometer* chart including the option to display multiple needles for when there are multiple Y-axes. The user has options to display a combination of multiple needles, multiple displayed speedometers and multiple odometers. Colors of each needle can be customized under the Colors tab (see Figure 9-32).

Figure 9-32

9.4.1 Speedometer Themes

All speedometers have Themes (see Figure 9-33). Themes apply a number of graphic settings to change the look of a speedometer. There are eight different speedometer themes: Classic, Modern, Chrome, Hot Rod, Gadget, Ranger, Precision, and Pointer (see Figure 9-34).

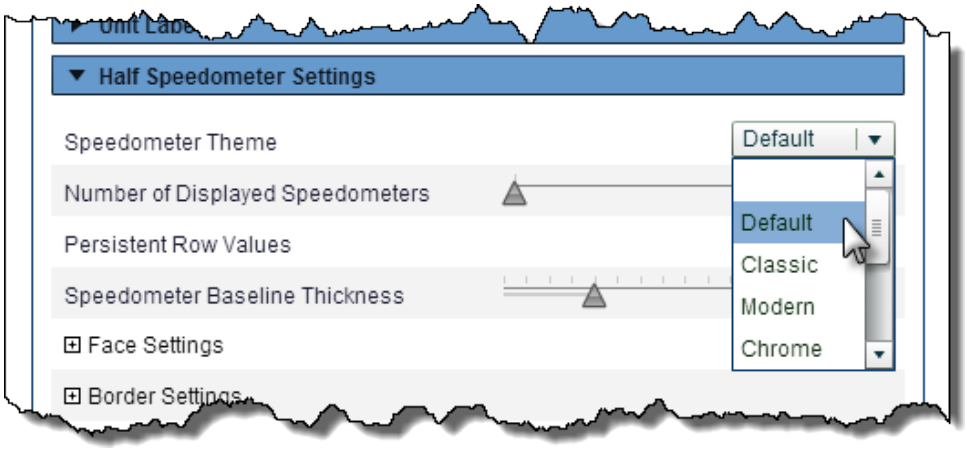


Figure 9-33

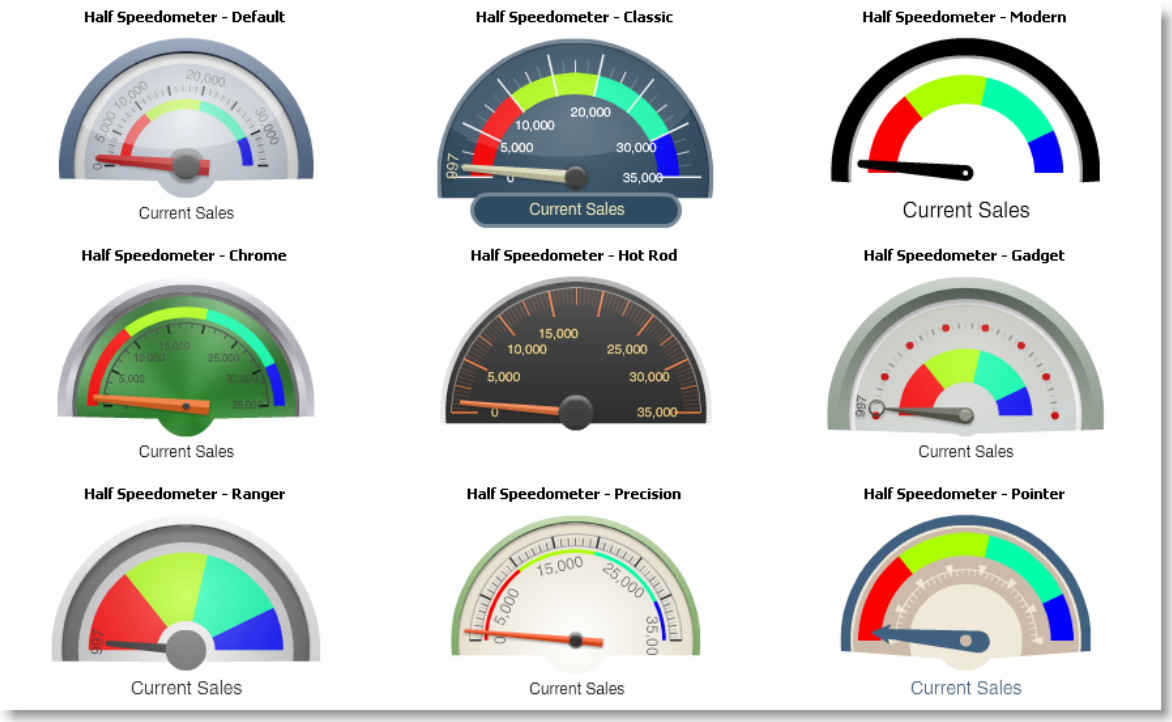


Figure 9-34

9.5 Bullet Charts

- **Horizontal Bullet** - Y-variables are displayed in linear horizontal gauges. Features include the ability to change the range colors and range values of the bar (see Figure 9-35).

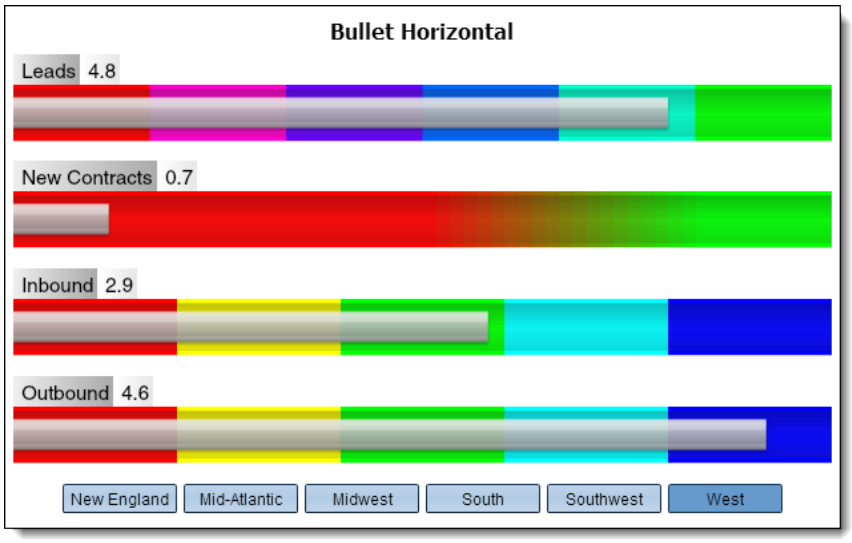


Figure 9-35

- **Bullet with Odometer (horizontal icon)** - The first Y-variable is displayed as a linear horizontal gauge and the rest of the Y-variables are displayed in an odometer like interface (see Figure 9-36).

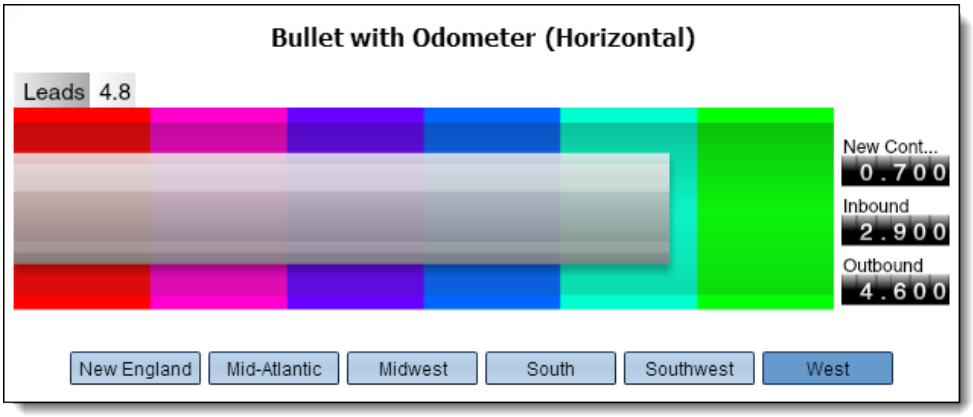


Figure 9-36

- **Target Bullet (horizontal icon)** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, six, etc. Y-variables as percentages of those targets, respectively in linear horizontal gauges (see Figure 9-37).

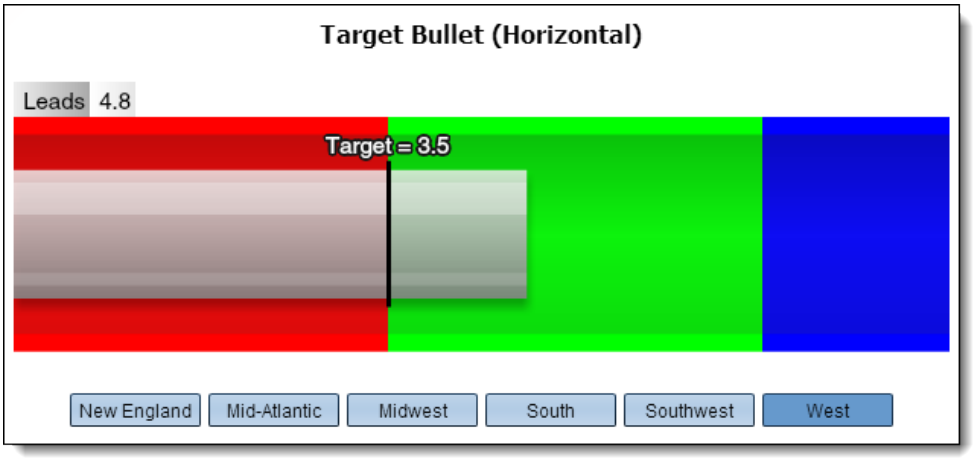


Figure 9-37

- **Vertical Bullet** - Y-variables are displayed in linear vertical gauges (see Figure 9-38).

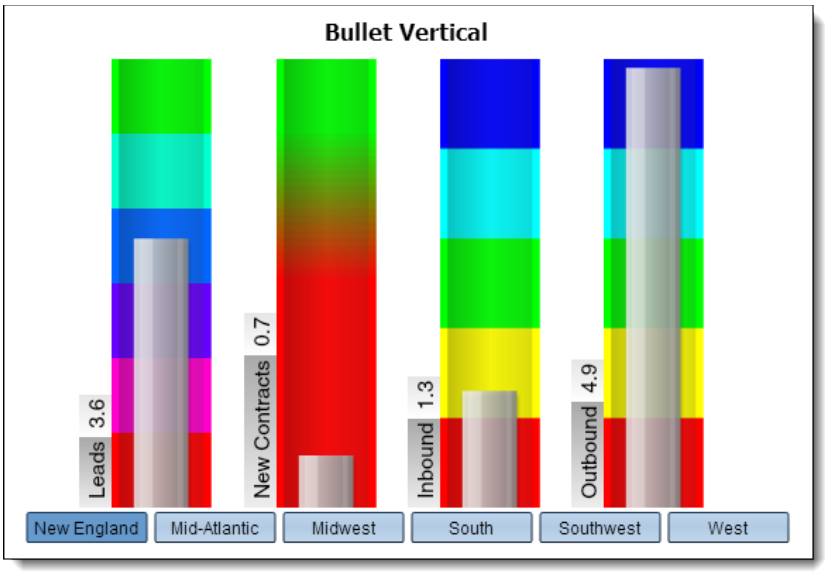


Figure 9-38

- **Bullet with Odometer (vertical icon)** - The first Y-variable is displayed as a vertical gauge and the rest of the Y-variables are displayed in an odometer like interface (see Figure 9-39).

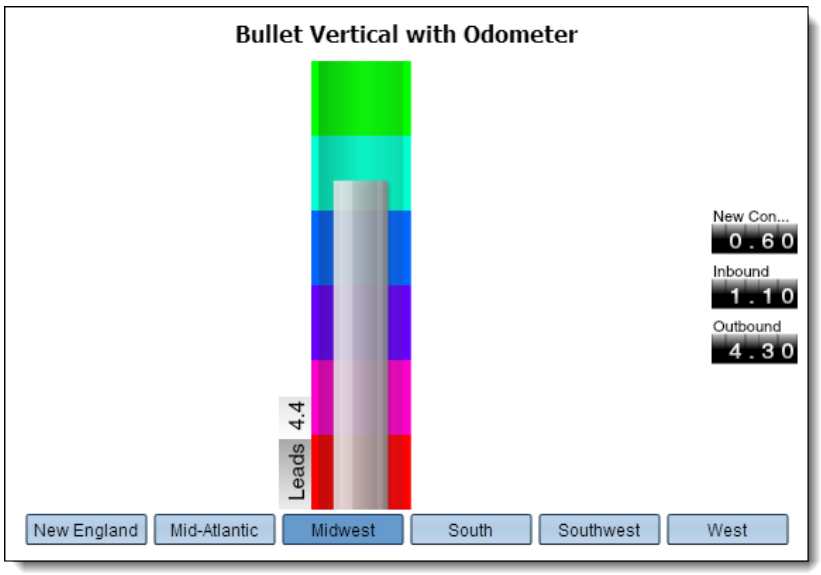


Figure 9-39

- **Target Bullet (vertical icon)** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, six, etc. Y-variables as percentages of those targets, respectively in linear vertical gauges (see Figure 9-40).

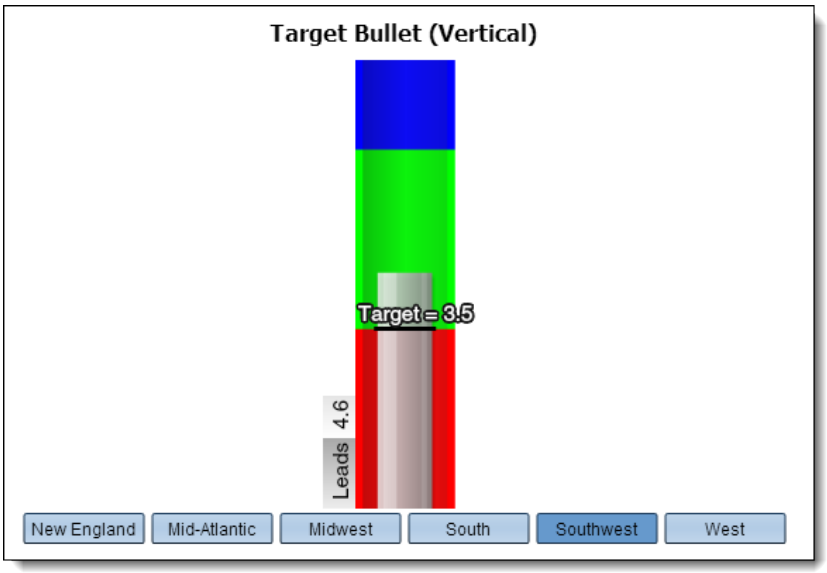


Figure 9-40

9.5.1 Bullet Themes

All Bullets have Themes (see Figure 9-41). Themes apply a number of graphic settings to change the look of the Bullet charts. There are eight different Bullet themes: Classic, Modern, Chrome, Hot Rod, Gadget, Ranger, Precision, and Pointer (see Figure 9-42).

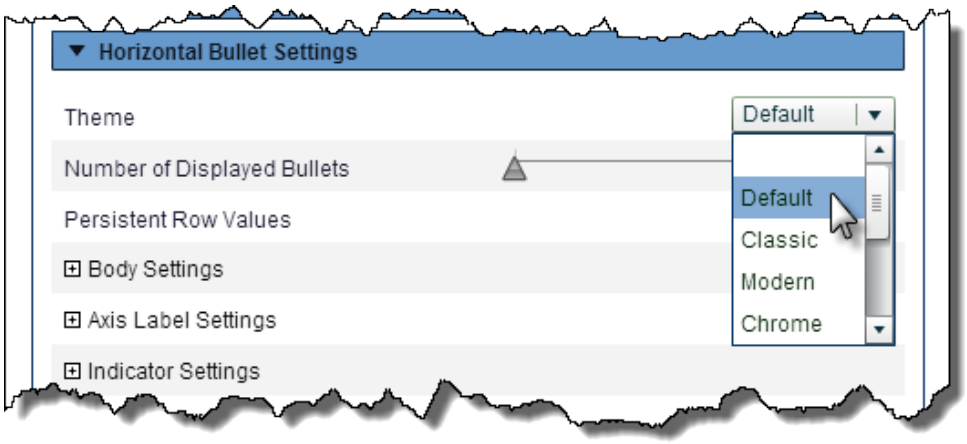


Figure 9-41

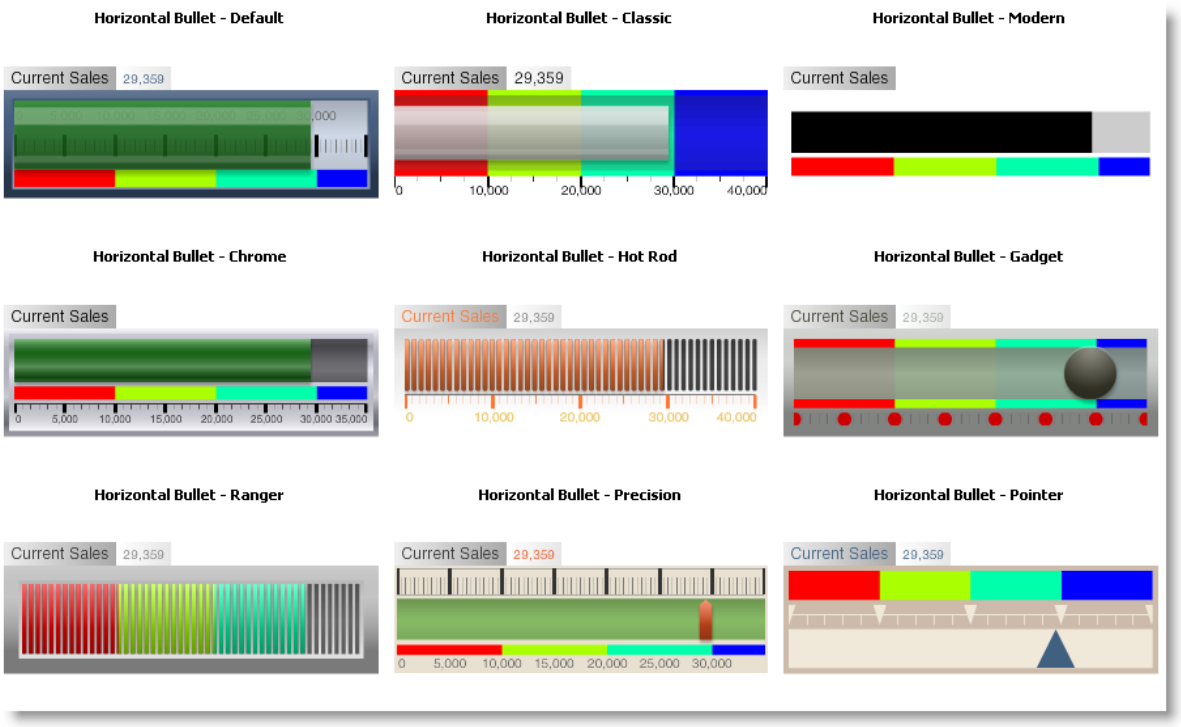


Figure 9-42

9.6 Thermometer Charts

- **Thermometer** - Y-variables are displayed in horizontal thermometer gauges (see Figure 9-43).

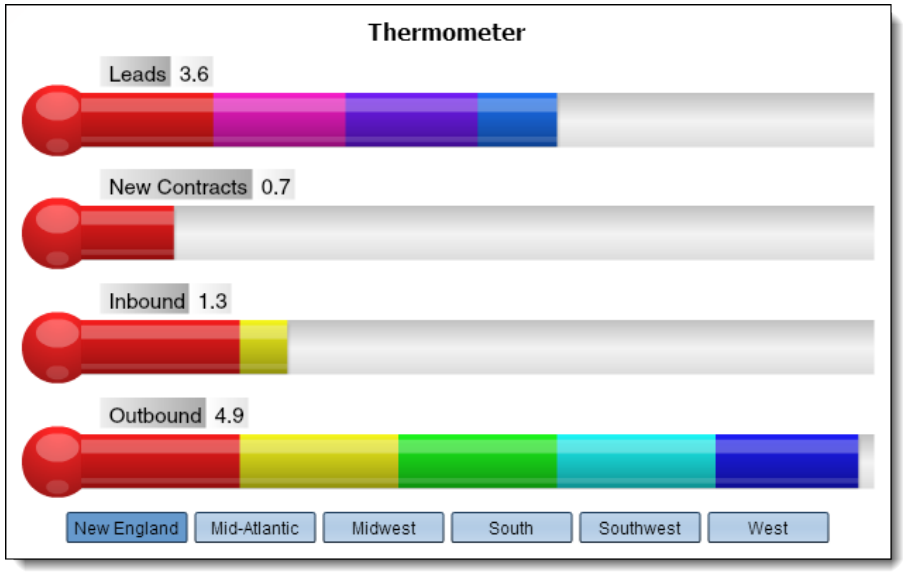


Figure 9-43

- **Thermometer with Odometer (horizontal icon)** - The first Y-variable is displayed as a horizontal thermometer gauge and the rest of the Y-variables are displayed in an odometer like interface (see Figure 9-44).

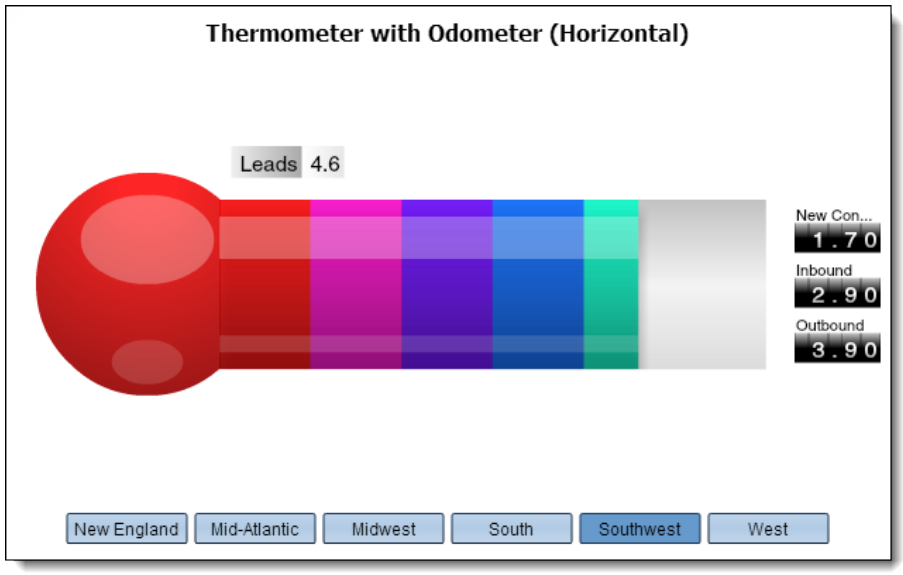


Figure 9-44

- **Target Thermometer (horizontal icon)** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, sixth, etc. Y-variables as percentages of those targets, respectively in horizontal thermometer gauges (see Figure 9-45).

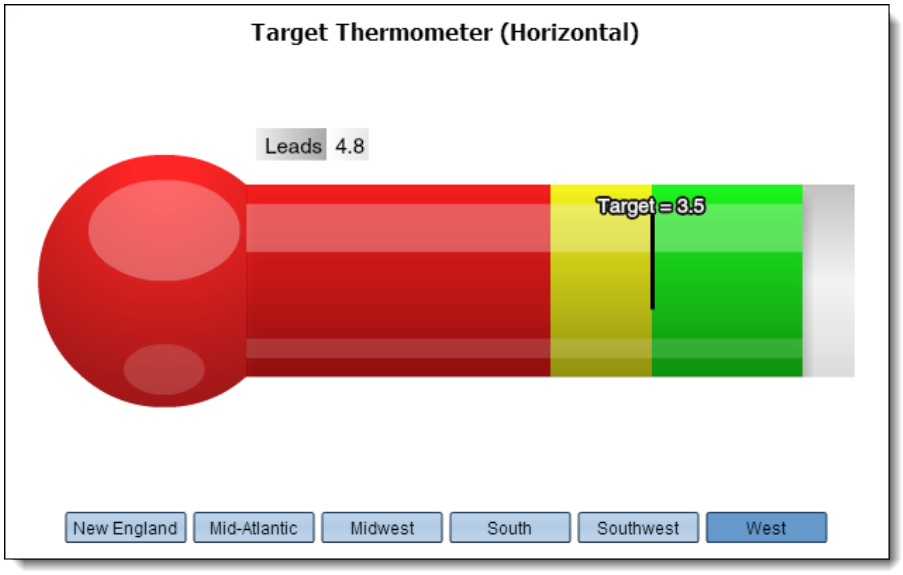


Figure 9-45

- **Vertical Thermometer** - Y-variables are displayed in vertical thermometer gauges (see Figure 9-46).

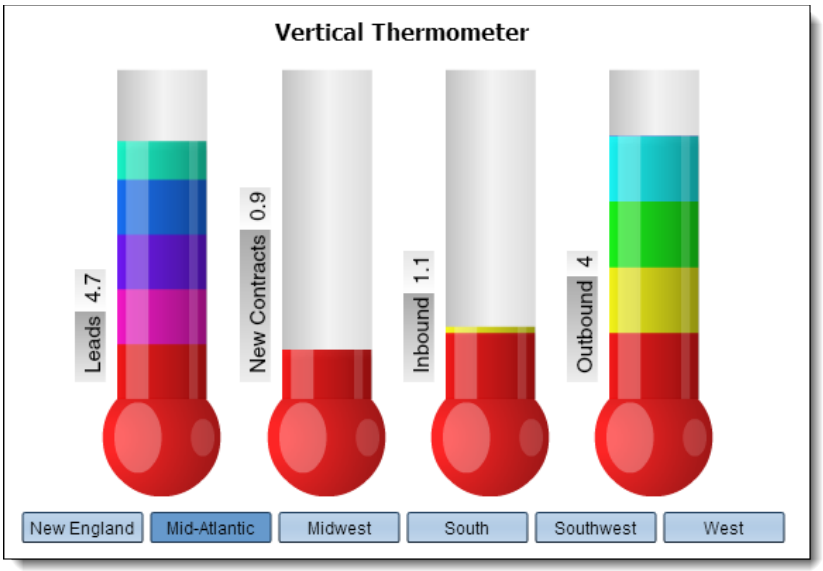


Figure 9-46

- **Thermometer with Odometer (vertical icon)** - The first Y-variable is displayed as a vertical thermometer gauge and the rest of the Y-variables are displayed in an odometer like interface (see Figure 9-47).

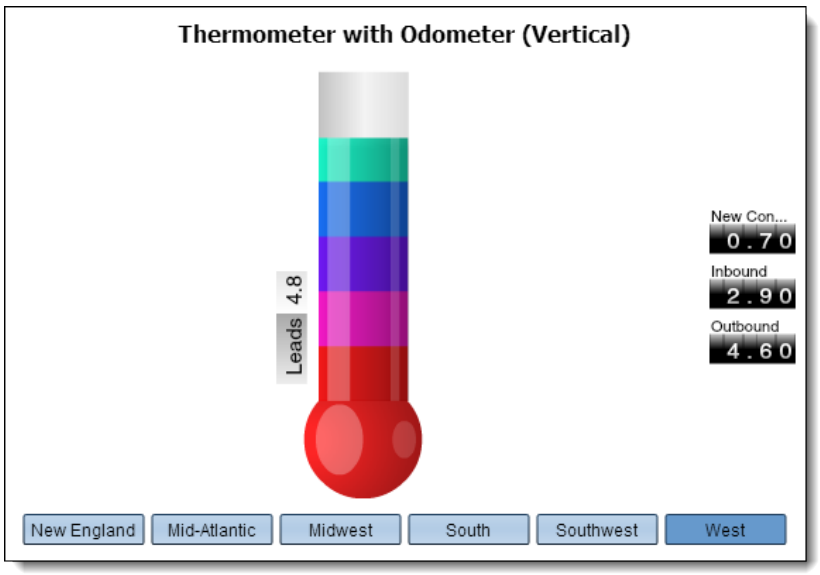


Figure 9-47

- **Target Thermometer (vertical icon)** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, six, etc. Y-variables as percentages of those targets, respectively in vertical thermometer gauges (see Figure 9-48).

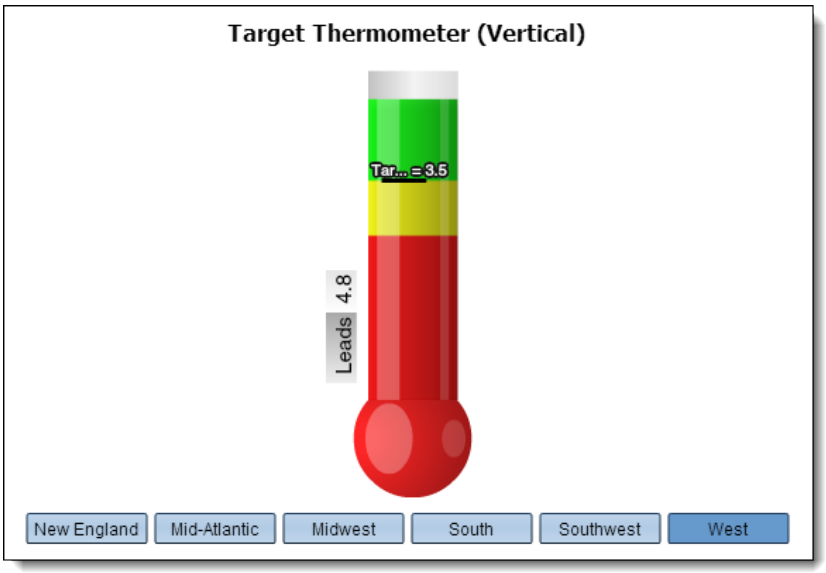


Figure 9-48

9.6.1 Thermometer Themes

All Thermometers have Themes (see Figure 9-49). Themes apply a number of graphic settings to change the look of the Thermometer charts. There are eight different Thermometer themes: Classic, Modern, Chrome, Hot Rod, Gadget, Ranger, Precision, and Pointer (see Figure 9-50).

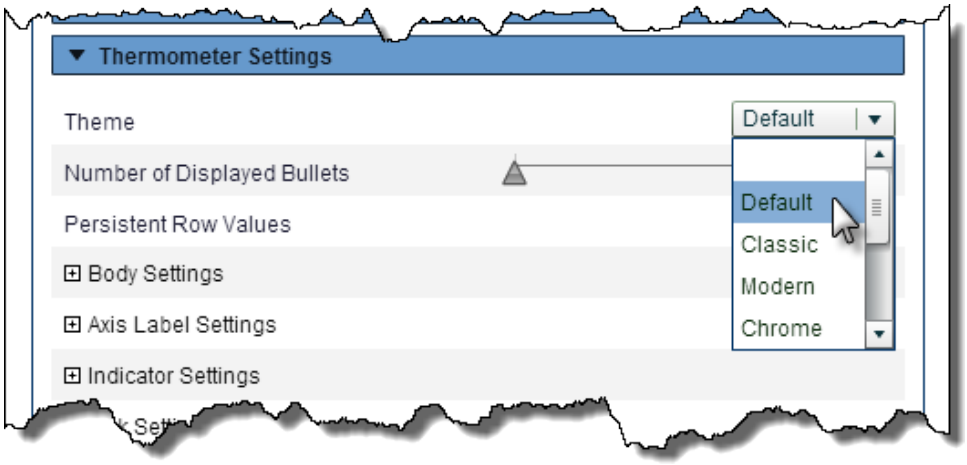


Figure 9-49

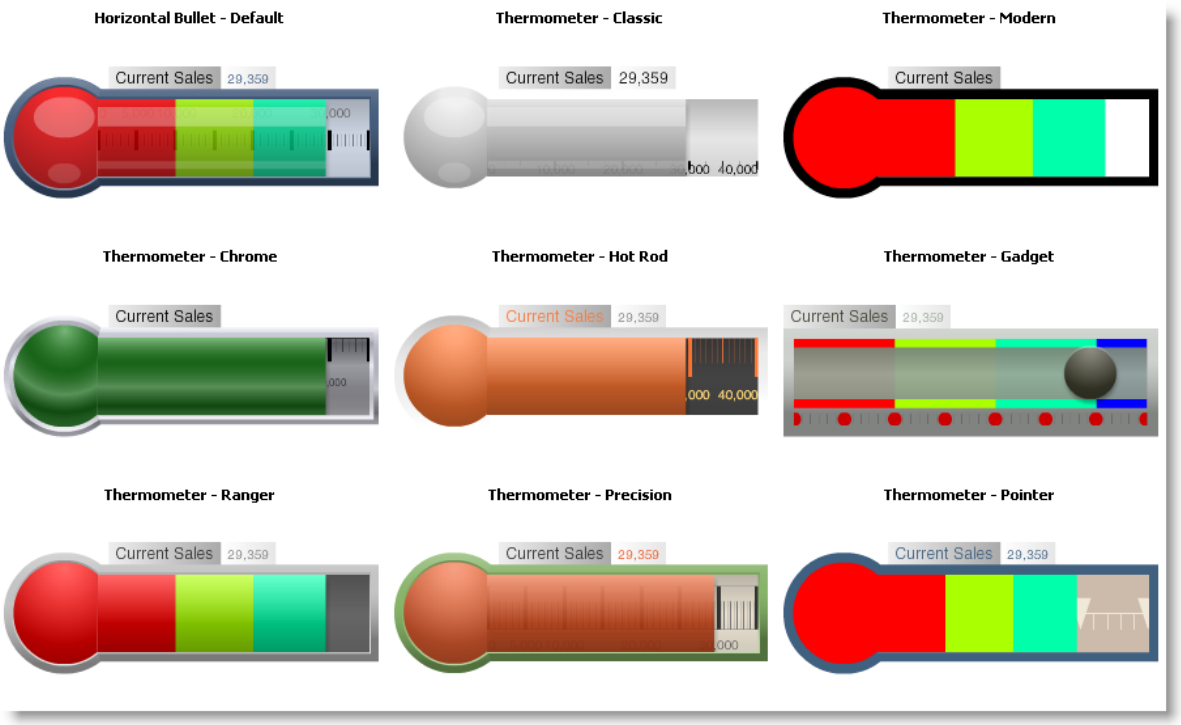


Figure 9-50

9.7 Metrics Charts

- **Metrics Chart** - Displays colored pixels to show relative performance of one or more metrics against corresponding performance benchmarks. Features include the ability to change the range colors and Datapoint shape (see Figure 9-51).

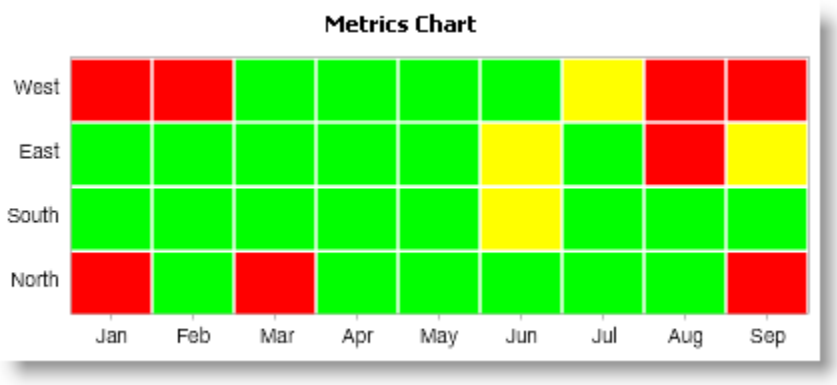


Figure 9-51

- **Metrics Bar Chart** - The same as a Metrics chart, except that the X values are displayed along the left side of the matrix instead of the bottom (see Figure 9-52).

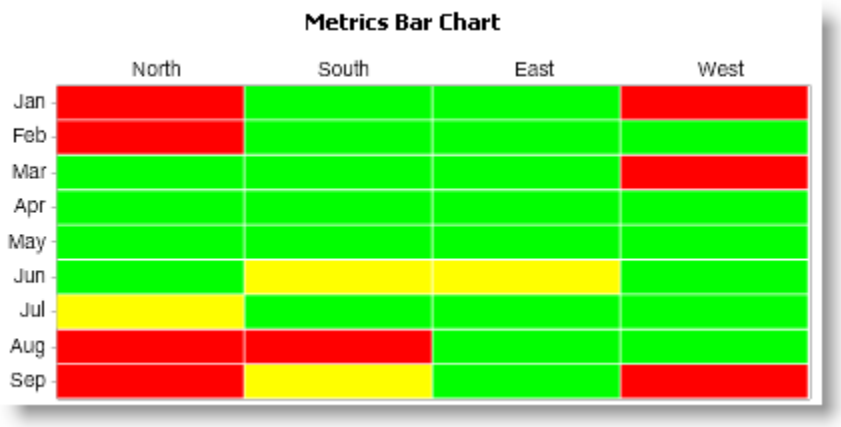


Figure 9-52

- **Metrics Target Chart** - Displays first, third, fifth, etc. Y-variables as target values; and the second, fourth, six, etc. Y-variables as percentages of those targets, respectively in colored shapes (see Figure 9-53). Use the mouse-over legend to see the percentages.

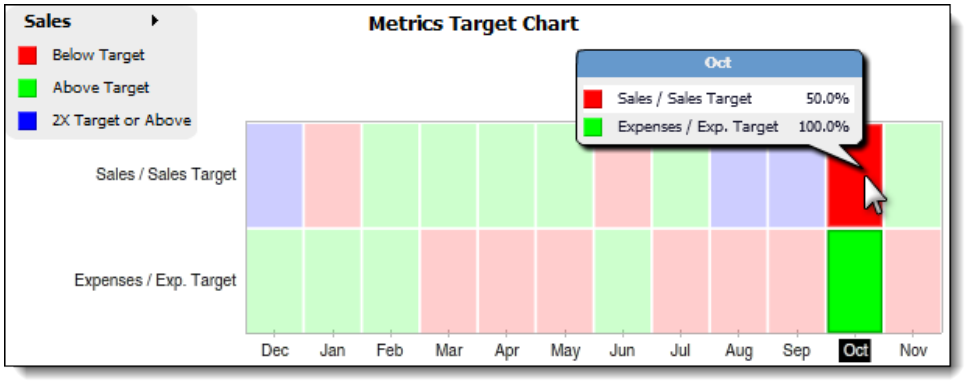


Figure 9-53

- **Metrics Bar Target Chart** - The same as a Metrics target chart, except that the X values are displayed along the left side of the matrix instead of the bottom (see Figure 9-54).

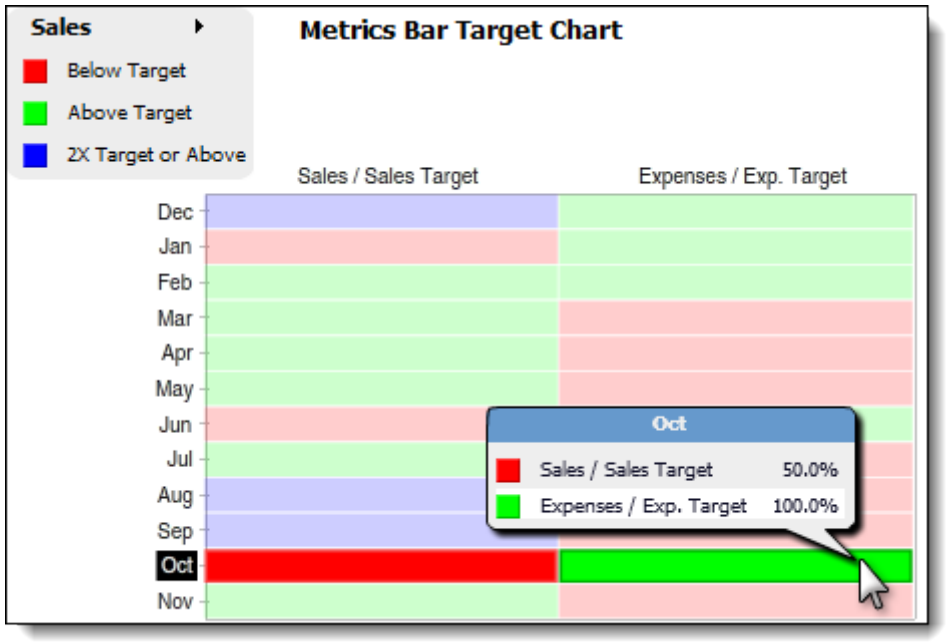


Figure 9-54

- **Metrics Scorecard** - Similar to the Tabular chart, this chart displays all the values of X and Y variables in a multi-row, multi-column Tabular format with colored pixels showing relative performance of one or more metrics against corresponding performance benchmarks (see Figure 9-55). All numeric Y-axes will expect a range value set for defining the box color.

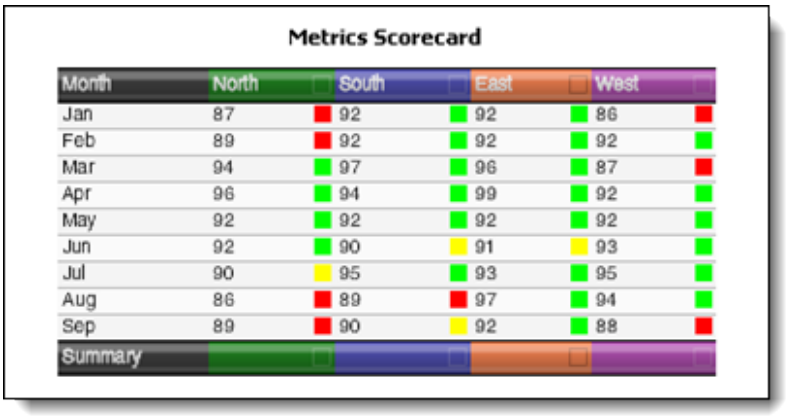

Metrics Scorecard
Month North South East West
Jan 87 92 92 86
Feb 89 92 92 92
Mar 94 97 96 87
Apr 96 94 99 92
May 92 92 92 92
Jun 92 90 91 93
Jul 90 95 93 95
Aug 86 89 97 94
Sep 89 90 92 88
Summary

Figure 9-55

- **Horizontal Metrics Ticker** - Displays metrics data scrolling from right to left as a ticker, with option to display colored up or down arrows for positive and negative values respectively (see Figure 9-56).

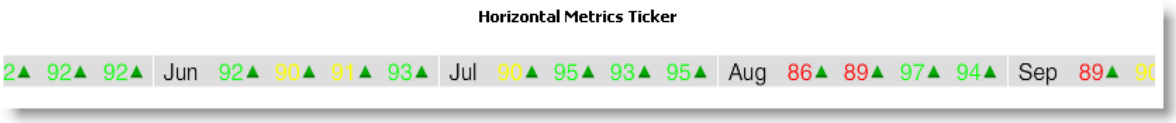


Figure 9-56

- **Vertical Metrics Ticker** - Displays metrics data scrolling from bottom to top as a ticker, with option to display colored up or down arrows for positive and negative values respectively. Ticker data is refreshed automatically per configurable frequency (see Figure 9-57).

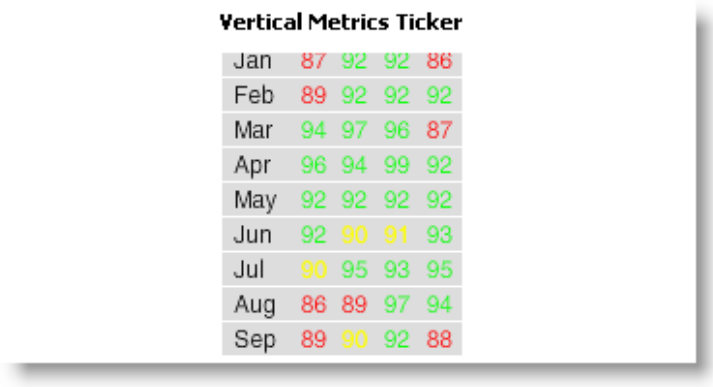


Figure 9-57

- **Stoplight** – Similar to a traffic light, this chart highlights one of three colored pixel in a spectrum of benchmark pixels arranged horizontally indicating performance of one or more metrics (see Figure 9-58).

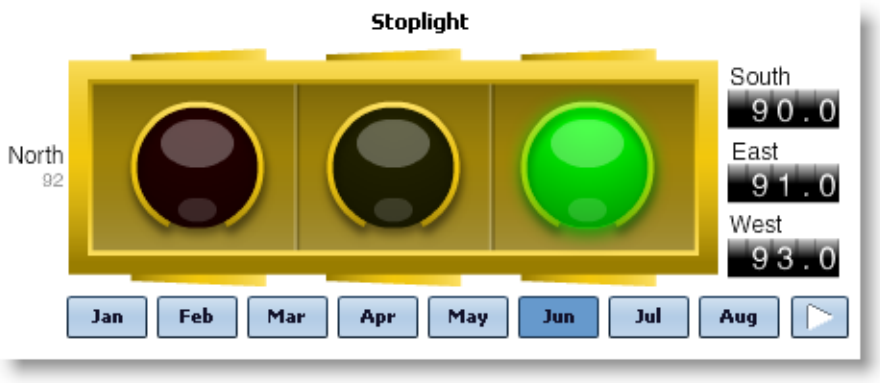


Figure 9-58

- **Vertical Stoplight** – Highlights a colored pixel in a spectrum of benchmark pixels indicating performance of one or more metrics (see Figure 9-59).

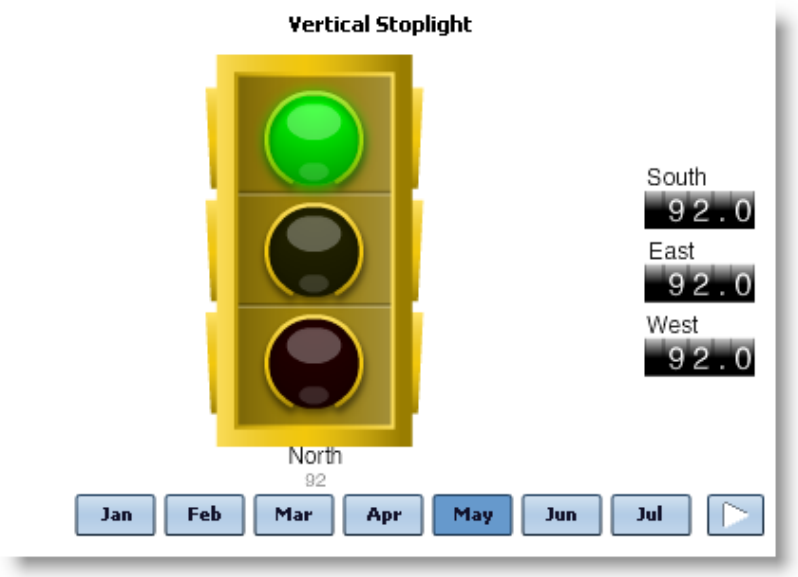


Figure 9-59

Note: *Stoplight chart types have the option to display Y-axes variables as odometer displays or to represent each Y-axes variable in a separate stoplight.*

9.7.1 Stoplight Themes

Both stoplights have Themes (see Figure 9-60). Themes apply a number of graphic settings to change the look of a speedometer. There are nine different stoplight themes: Classic (as shown in Figure 9-58 and Figure 9-59), Default, Modern, Chrome, Hot Rod, Gadget, Ranger, Precision, and Pointer (see Figure 9-61).

Figure 9-60

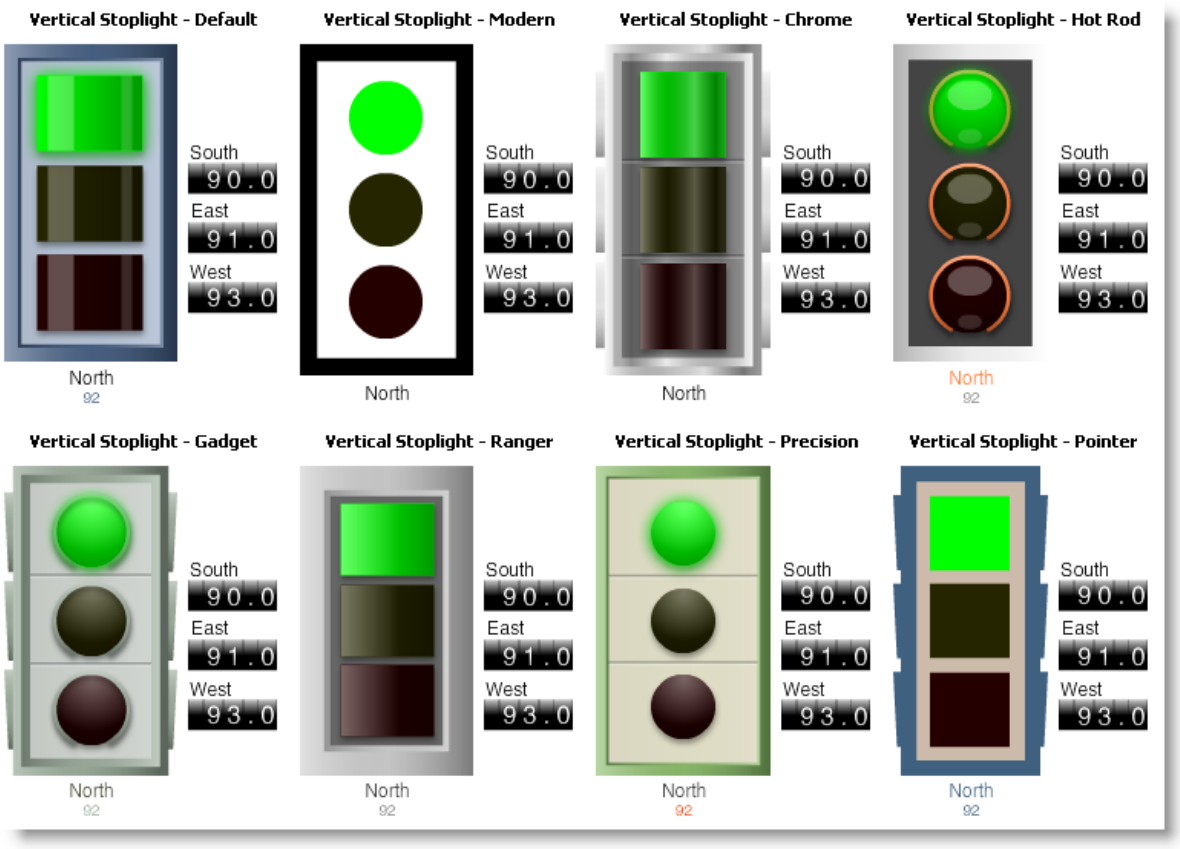


Figure 9-61

9.8 Line Charts

- **Trend Line** - Plots Y-variables as lines against the vertical axis (see Figure 9-62).

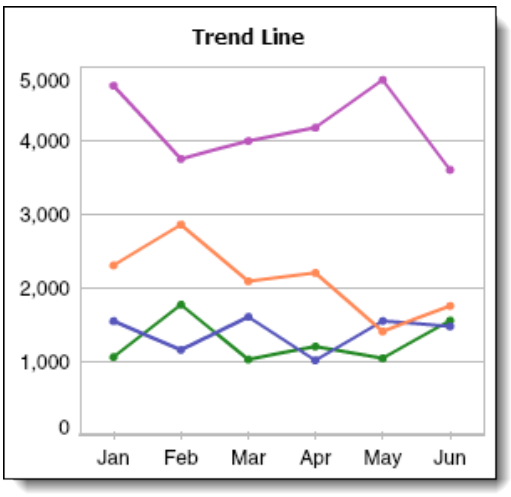


Figure 9-62

- **Sparkline** - Variations of each Y-variable are represented in individual line charts, stacked into a simple and condensed chart (see Figure 9-63).

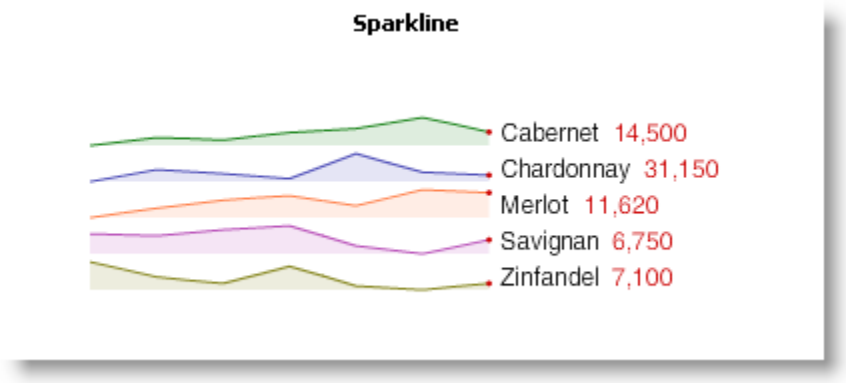


Figure 9-63

- **Scatter Chart** - Plots Y-variables as individual data points with an option to have a regression line for each Y-variable (see Figure 9-64).

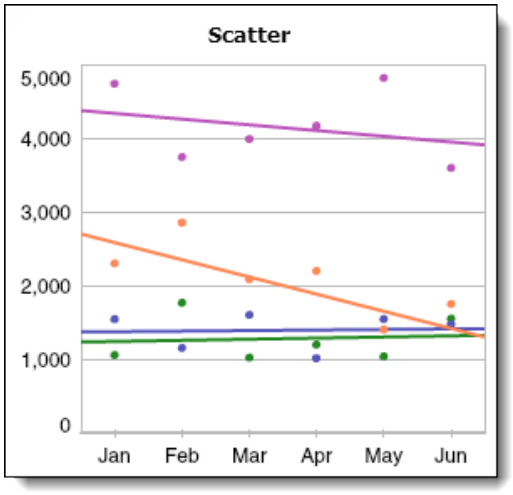


Figure 9-64

- **Smooth Line** - Plots Y-variables as smooth lines against the vertical axis (see Figure 9-65).

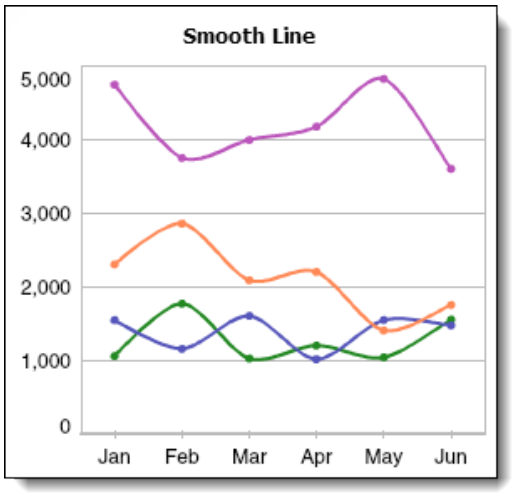


Figure 9-65

- **3D Trend Line** - Plots Y-variables as 3D lines against the vertical axis (see Figure 9-66).

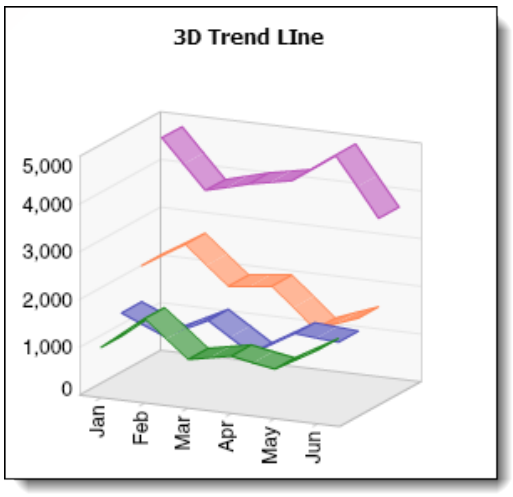


Figure 9-66

- **Area** - Plots Y-variables as lines with shading of the area between the lines and the X-axis (see Figure 9-67).

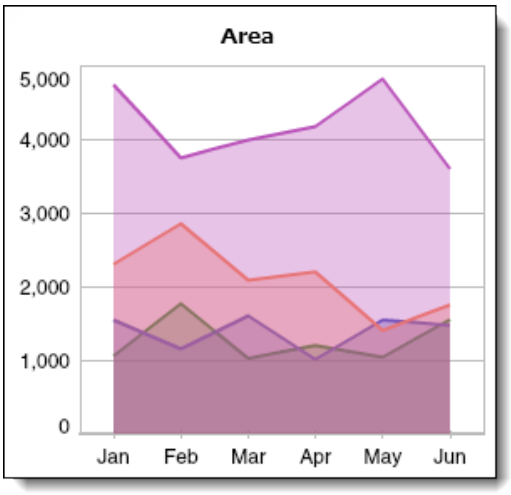


Figure 9-67

- **Smooth Area** - Plots Y-variables as smooth lines with shading of the area between the lines and the x-axis (see Figure 9-68).

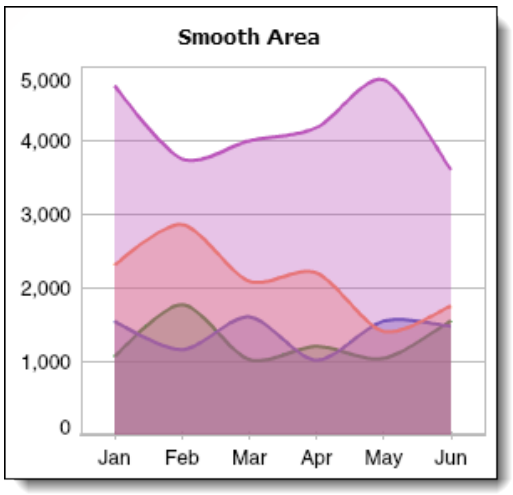


Figure 9-68

- **Stacked Area** - Plots Y-variables as consecutive stack of lines with shading of the area between the lines and the X-axis (see Figure 9-69).

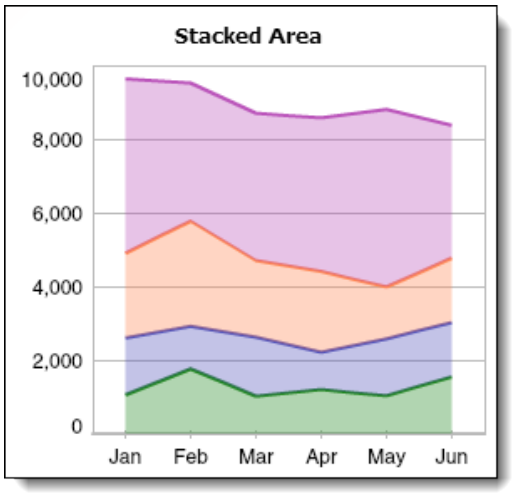


Figure 9-69

- **Stacked Ratio Area** - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a stacked area chart (see Figure 9-70).

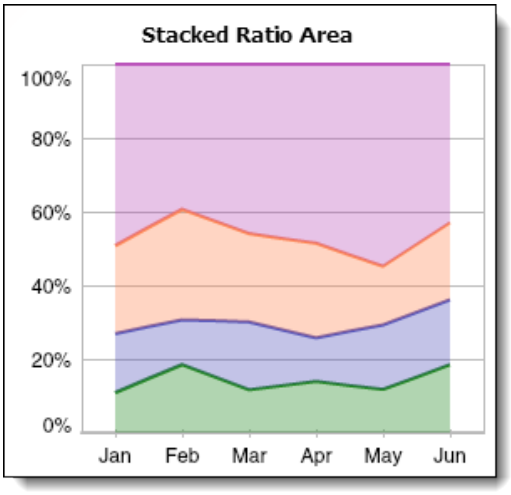


Figure 9-70

- **3D Area** - Plots Y-variables as 3D lines with shading of the area between the lines and the x-axis (see Figure 9-71).

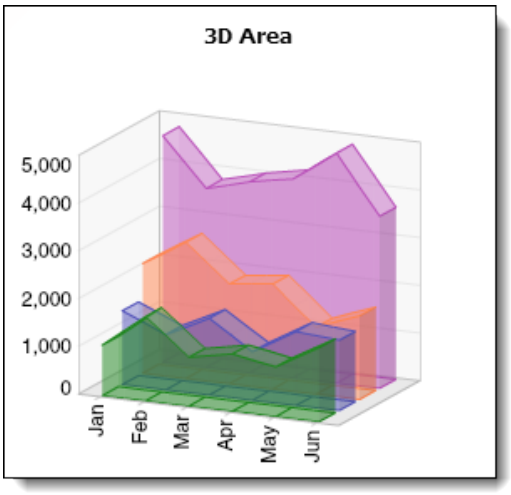


Figure 9-71

- **3D Stacked Area** - Plots Y-variables as consecutive stack of 3D lines with shading of the area between the lines and the x-axis (see Figure 9-72).

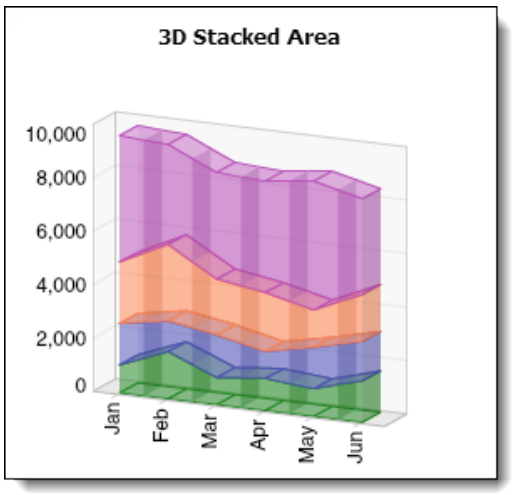


Figure 9-72

3D Stacked Ratio Area - Displays the relative contribution of each Y-variable as a percentage of the total that is represented in a 3D stacked area chart (see Figure 9-73).

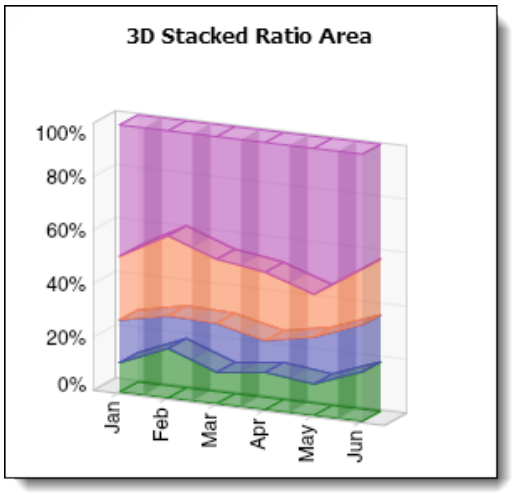


Figure 9-73

9.9 Pie Charts

Note: *Pie Charts can only display a maximum of 70 rows.*

Note: *There will always be a possibility that the pie slice percentages do not add up to exactly 100 percent. Take for example the following 5 slices: 20.6, 20.6, 20.6, 20.6, and 17.6. They add up to exactly 100%. However if you round each to its nearest whole number, you have 21, 21, 21, 21 and 18, which add up to 102%.*

- **2D Pie** - Displays the relative contribution of each Y-variable to the total that is represented in a circular pie (see Figure 9-74).

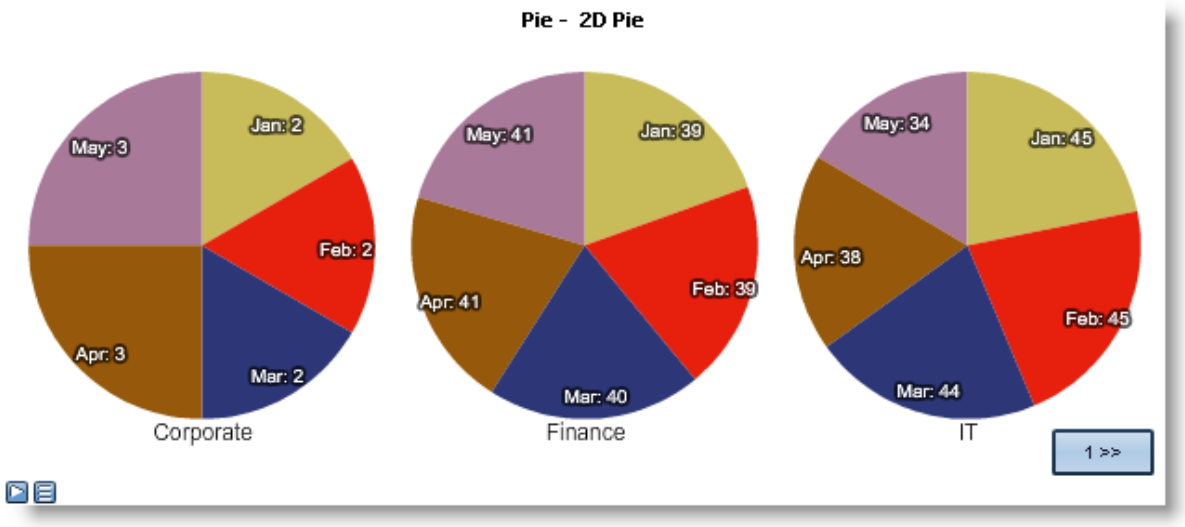


Figure 9-74

- **Exploded 2D Pie** - A 2-dimensional pie with gaps between the slices. Displays the relative contribution of each Y-variable to the total that is represented in a circular donut-shaped pie (see Figure 9-75).

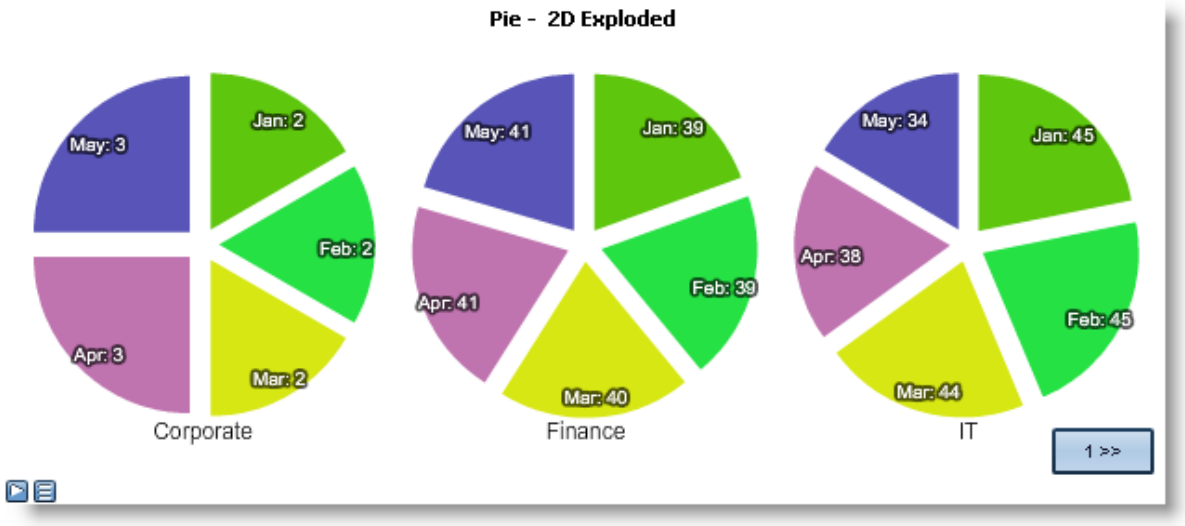


Figure 9-75

- **2D Donut** - A donut-shaped pie chart. Displays the relative contribution of each Y-variable to the total that is represented in a circular donut-shaped pie (see Figure 9-76).

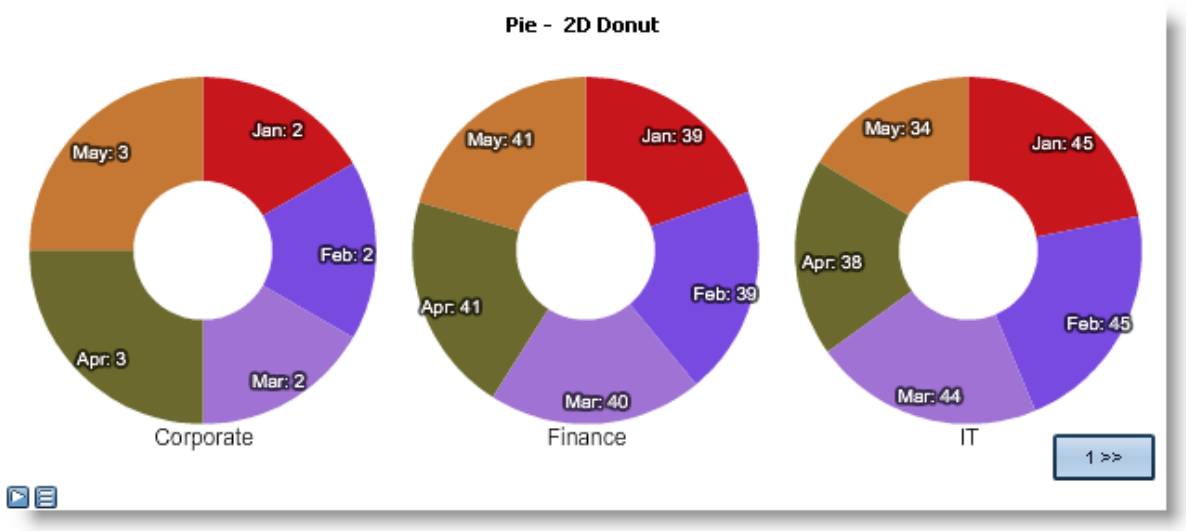


Figure 9-76

- **Exploded 2D Donut** - A donut-shaped pie chart with gaps between the slices. Displays the relative contribution of each Y-variable to the total that is represented in a donut-shaped pie (see Figure 9-77).

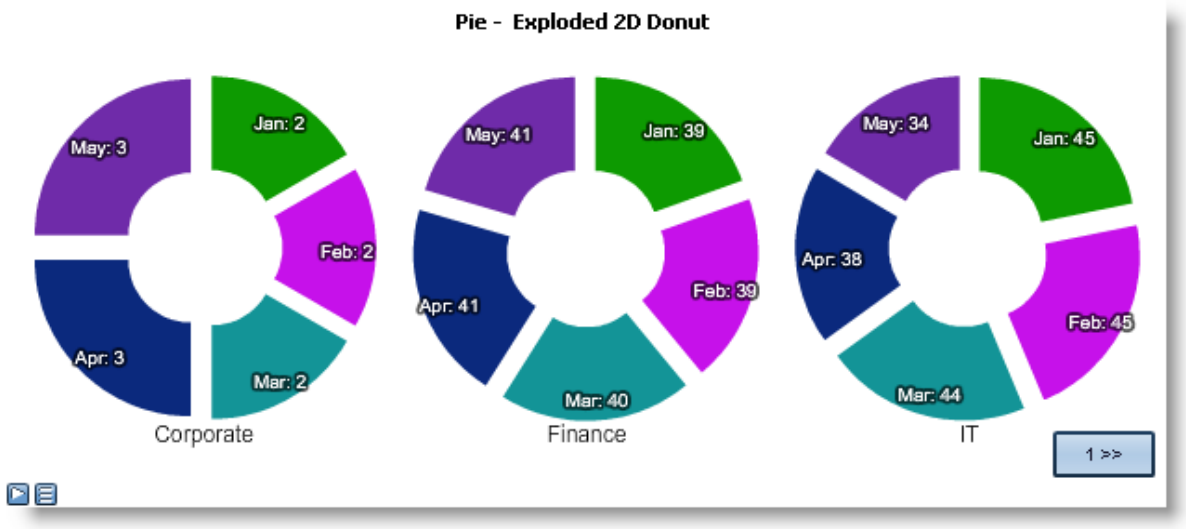


Figure 9-77

- **3D Pie** - A 3-dimensional pie chart that displays the relative contribution of each Y-variable to the total that is represented in a circular pie (see Figure 9-78).

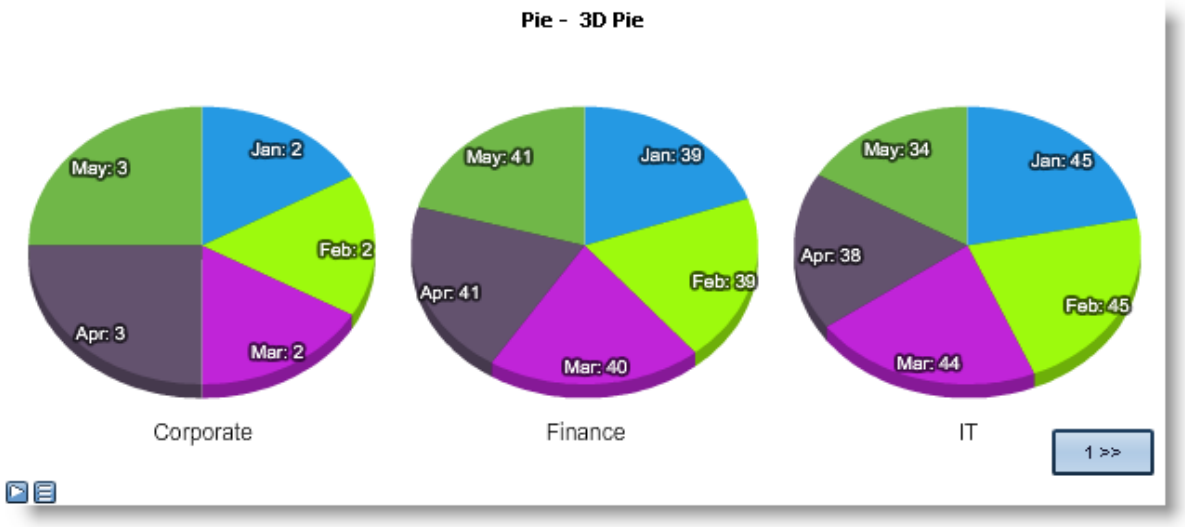


Figure 9-78

- **Exploded 3D Pie** - A 3-dimensional pie with gaps between the slices. Displays the relative contribution of each Y-variable to the total that is represented in a circular pie (see Figure 9-79).

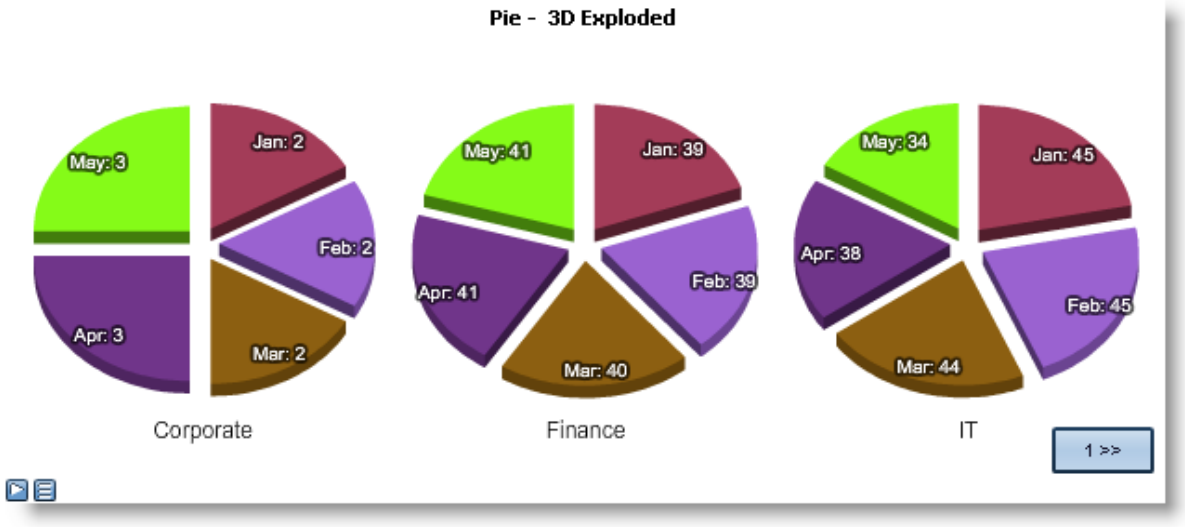


Figure 9-79

- **3D Donut** - A 3-dimensional donut-shaped pie chart. Displays the relative contribution of each Y-variable to the total that is represented in a circular donut-shaped pie (see Figure 9-80).

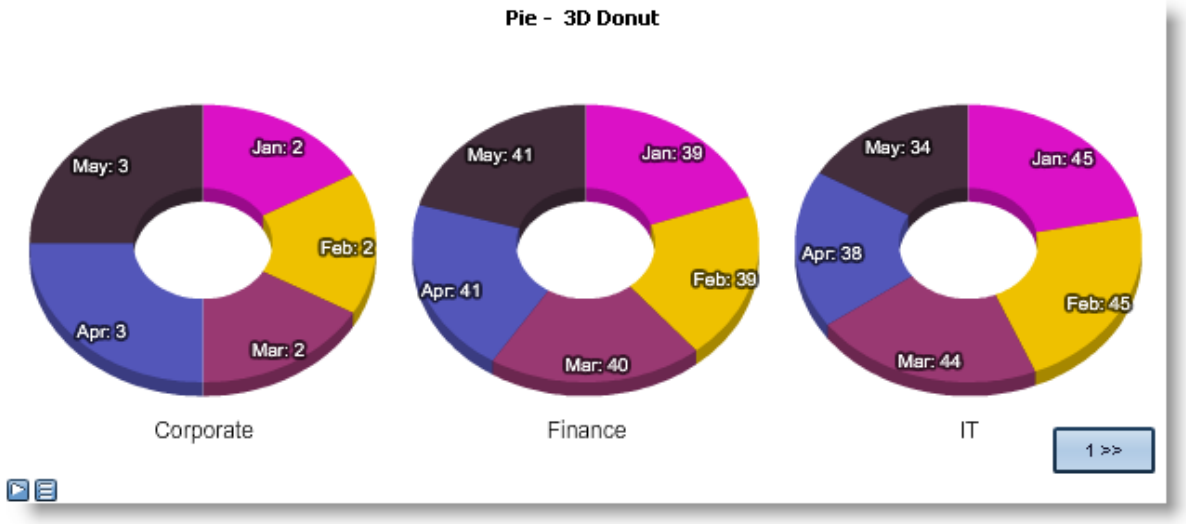


Figure 9-80

- **Exploded 3D Donut** - A 3-dimensional donut-shaped pie chart with gaps between the slices. Displays the relative contribution of each Y-variable to the total that is represented in a donut-shaped pie (see Figure 9-81).

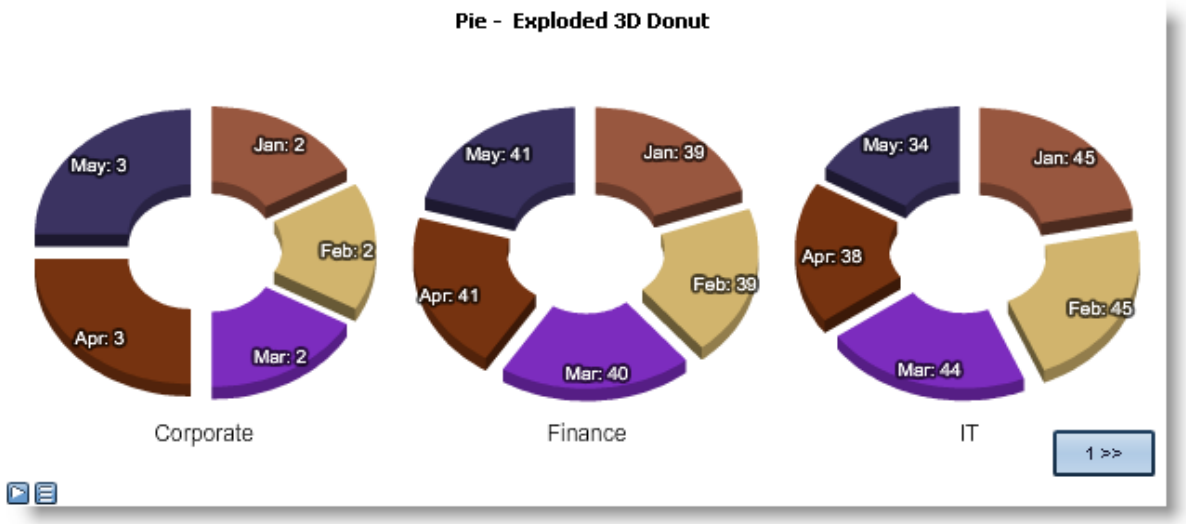


Figure 9-81

9.10 Pyramid and Funnel Charts

Note: *Each height of an area represents the relative weight of each data point.*

- **Pyramid** - Displays the relative contribution of each Y-variable to the total that is represented in a 2-dimensional pyramid (see Figure 9-82).

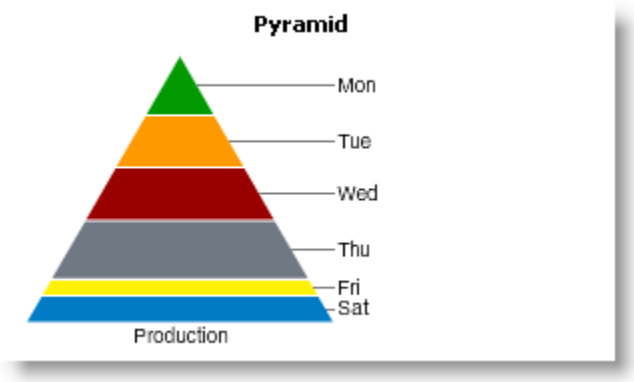


Figure 9-82

- **Pyramid 3D** - Displays the relative contribution of each Y-variable to the total that is represented in a 3-dimensional pyramid (see Figure 9-83).

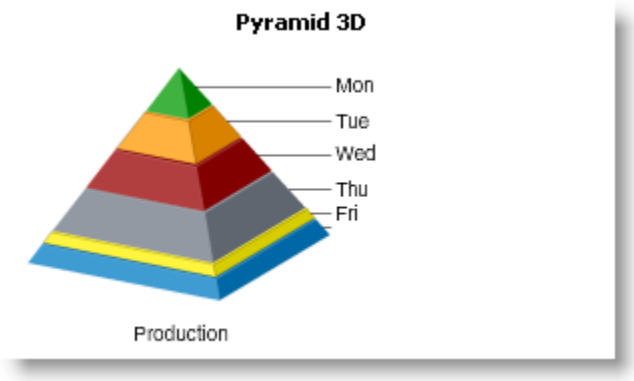


Figure 9-83

- **Cone** - Displays the relative contribution of each Y-variable to the total that is represented in a cone (see Figure 9-84).

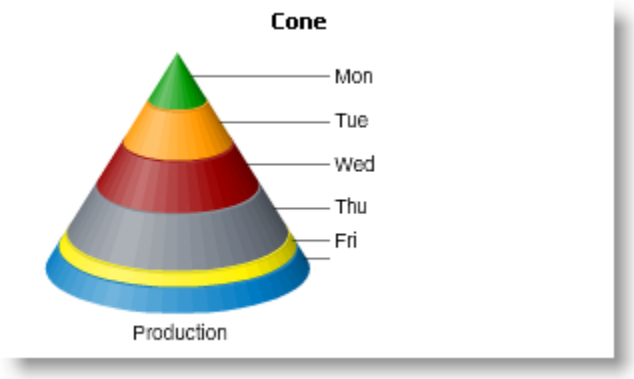


Figure 9-84

- **Funnel** - Displays the relative contribution of each Y-variable to the total that is represented in a 2-dimensional funnel (see Figure 9-85).

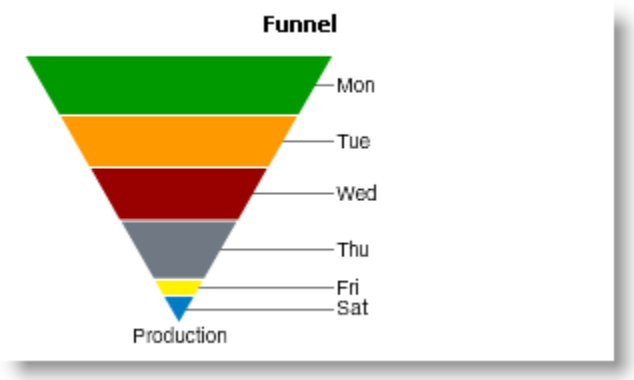


Figure 9-85

- **Funnel 3D** - Displays the relative contribution of each Y-variable to the total that is represented in a 3-dimensional funnel (see Figure 9-86).

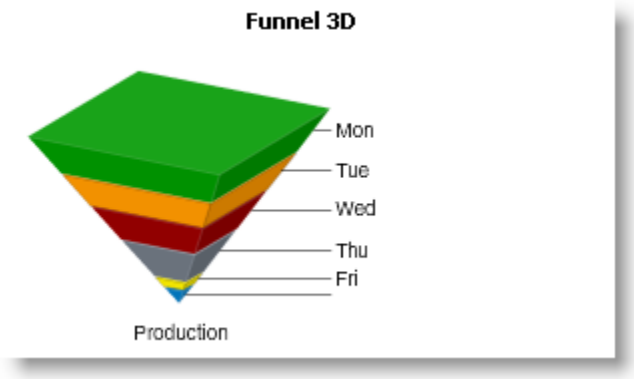


Figure 9-86

- **Funnel Cone** - Displays the relative contribution of each Y-variable to the total that is represented in an inverted cone (see Figure 9-87).

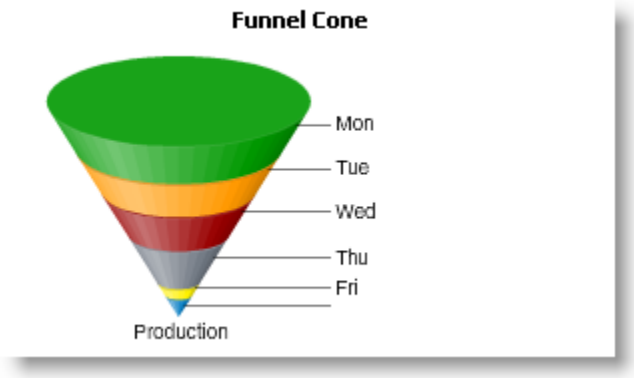
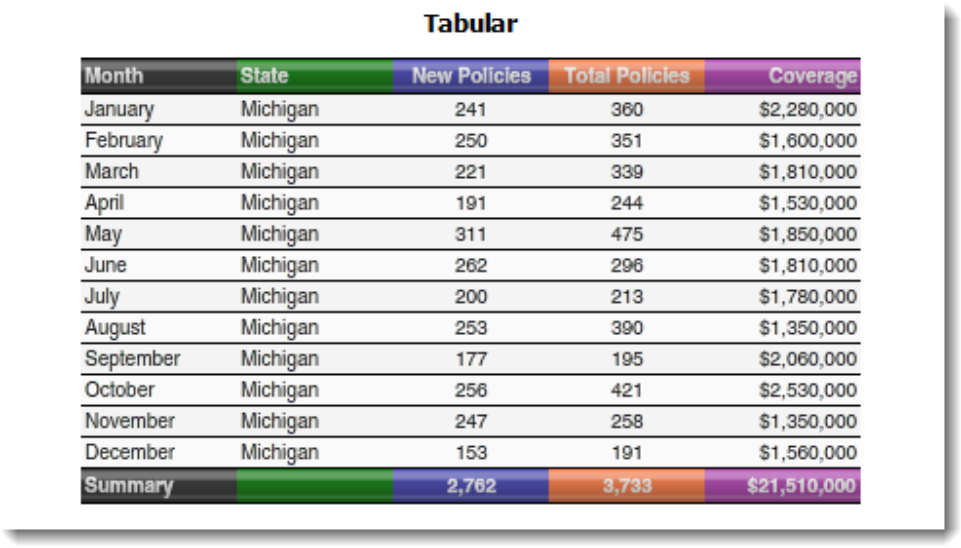


Figure 9-87

9.11 Tabular Charts

All tabular charts have the option to set alignments (left, centered or right) for each individual column. Axis summaries, aggregation, sorting column headers and word-wrap are other shared properties within all tabular charts.

- **Tabular Chart** - Displays all the values of X and Y variables in a multi-row, multi-column Tabular format (see Figure 9-88). Applying a color to a numeric Y-axes is an option if upper and lower limits are enabled. A maximum of three colors is possible: numbers above the 'upper limit', numbers below the 'lower limit', and numbers in-between. All numeric Y-axes will use the same limits.



Tabular

Month	State	New Policies	Total Policies	Coverage
January	Michigan	241	360	$2,280,000
February	Michigan	250	351	$1,600,000
March	Michigan	221	339	$1,810,000
April	Michigan	191	244	$1,530,000
May	Michigan	311	475	$1,850,000
June	Michigan	262	296	$1,810,000
July	Michigan	200	213	$1,780,000
August	Michigan	253	390	$1,350,000
September	Michigan	177	195	$2,060,000
October	Michigan	256	421	$2,530,000
November	Michigan	247	258	$1,350,000
December	Michigan	153	191	$1,560,000
Summary		2,762	3,733	$21,510,000

Figure 9-88

- **Report** - Displays all the values of X and Y variables in a grid format with the ability to group and sub-group data rows. Option to collapse and expand rows of data groups (see Figure 9-89). Note that you can click on a column header to sort the data on that column.

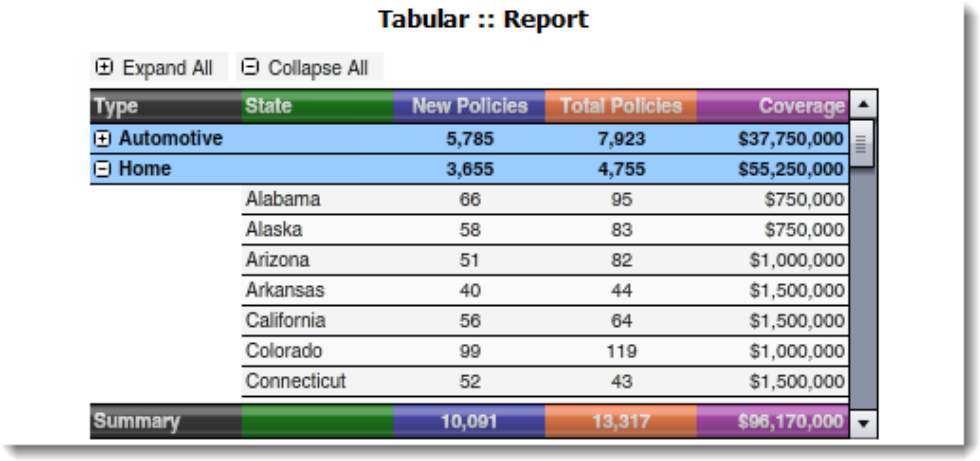


Figure 9-89

- **Scorecard** - The same as a Tabular chart, including the ability to use a variety of shapes to visually indicate multiple range sets (see Figure 9-90). Colored indicators are optional, and can be used on one or more numeric X or Y column. See Table 3 for examples of each available shape.

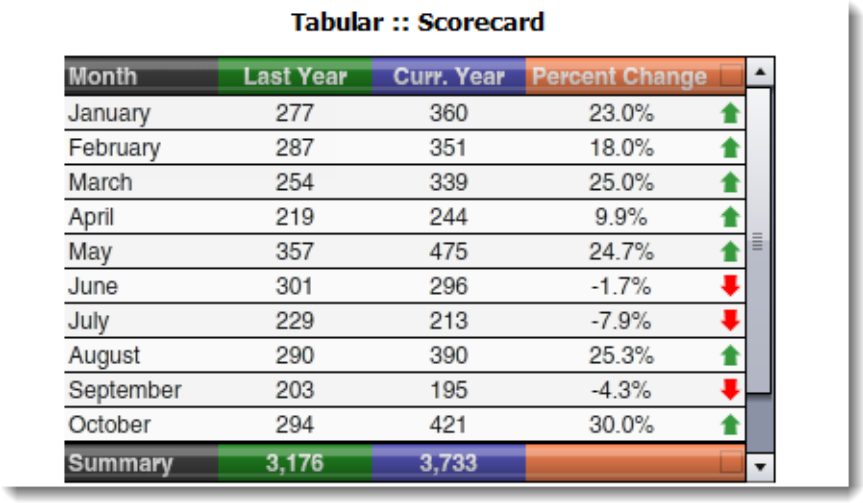


Figure 9-90

Range Shapes				
Square	Arrow	Arrow Inv.	Triangle	Triangle Inv.
■ & ■	▲ & ▲	▼ & ▼	▲ & ▲	▼ & ▼

Table 3

9.12 Calendar Charts

iDashboards includes a set of calendar charts that can be used to track events. The Calendar Chart group has four chart types; Monthly Calendar, Monthly Event Calendar, Weekly Calendar and Daily Calendar.

9.12.1 Data Layout

For a calendar chart to function properly the X-Axis has to be of type 'datetime'. The datetime data may or may not include the time. The Y-Axes of a calendar chart can be of type number, string or datetime.

In the sample data in Table 4, the 'Date_Time' column will be the X-Axis while the other four columns will be Y-Axes. Each row of data will be displayed in the calendar corresponding to the date in the 'Date_Time' column, as shown in Figure 9-91. A Monthly Event Calendar chart is used in this example.

Date_Time	Type	Deposit	Withdrawal	PostingDate
6/3/13 11:57 AM	Deposit	5000		6/5/13 11:57 AM
6/6/13 8:51 PM	Deposit	1342.11		6/8/13 8:51 PM
6/10/13 8:37 PM	Multi	1382.34	-877.71	6/12/13 8:37 PM
6/11/13 4:59 AM	Multi	469.29	-882.58	6/13/13 4:59 AM
6/14/13 1:35 AM	Withdrawal		-1100.69	6/16/13 1:35 AM

Table 4

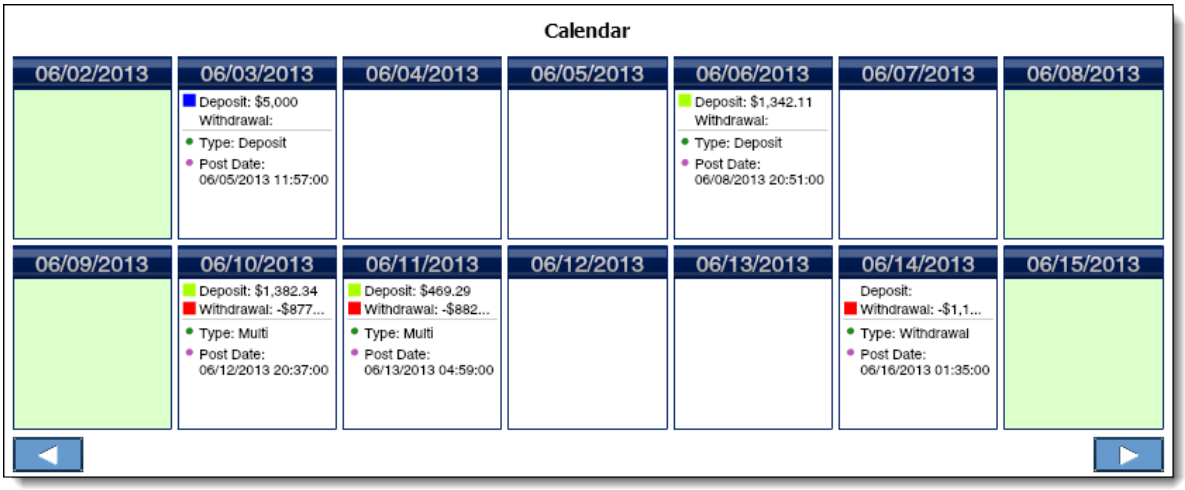


Figure 9-91

In all four calendar chart types, hovering your mouse over a date will pop-up a display that shows full data for that date (see Figure 9-92). In order for the pop-up to work the "Show Mouse-over Value" in the 'Basic Settings' of the 'Chart Properties' needs to be checked.

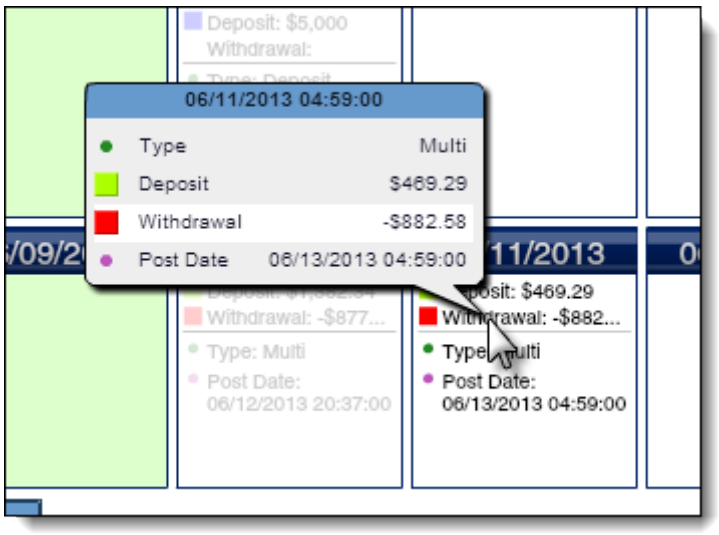


Figure 9-92

9.12.2 Calendar Types

9.12.2.1 Monthly Calendar

The Monthly Calendar chart displays multiple months at one time. Each day within a month will display configurable colored shapes to show performance of one or more metrics against defined range sets. See Section 11.3, “Range Sets” for more information on range sets.

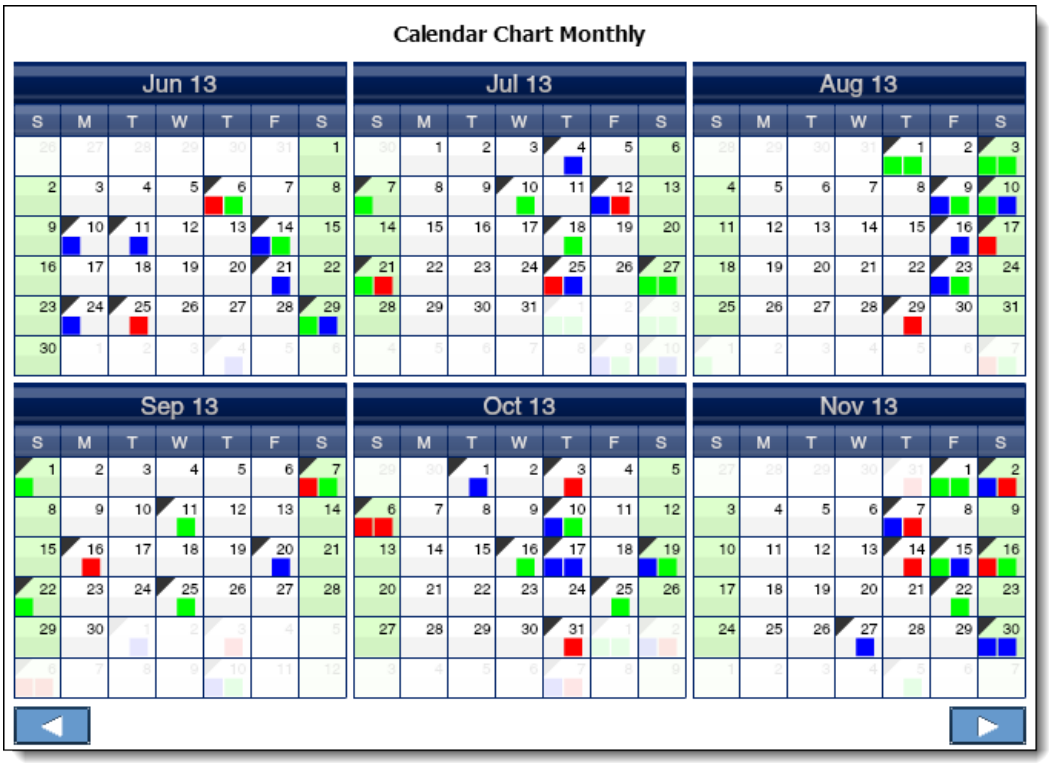


Figure 9-93

Specific behaviors of the Monthly Calendar chart are as follows:

- The chart will map one row of data for each date cell. If there is a time element of the date, it will be ignored.
- If there are multiple rows of data with the same date, the chart will use the first date occurrence and ignore the others.
- Each date cell will display one colored square for each numeric Y-Axis. Hovering over the shape will display the data.
- Each date cell will display a triangle in the upper left when there are string-based Y-Axes present. Hovering over the triangle will display the values.

9.12.2.2 Monthly Event Calendar

The Monthly Event Calendar chart displays a monthly calendar with one or more metrics for each day. Its behavior is similar to the Monthly Calendar except that it only displays one month at a time and that all data is displayed in the date cell without the need to mouse-over.

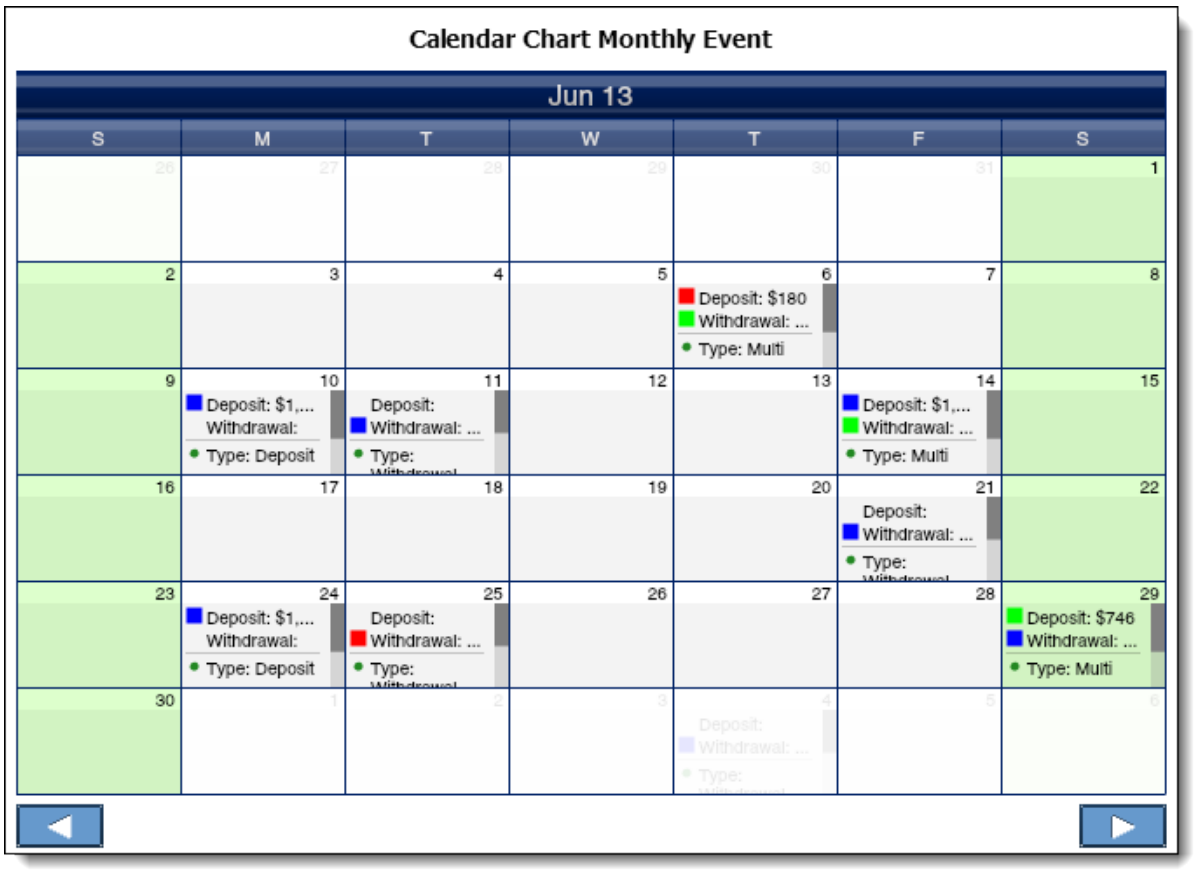


Figure 9-94

9.12.2.3 Weekly Calendar

The Weekly Calendar chart displays the days of the week. Its behavior is similar to the Monthly Events chart except that you can control the number of days being displayed at a time.

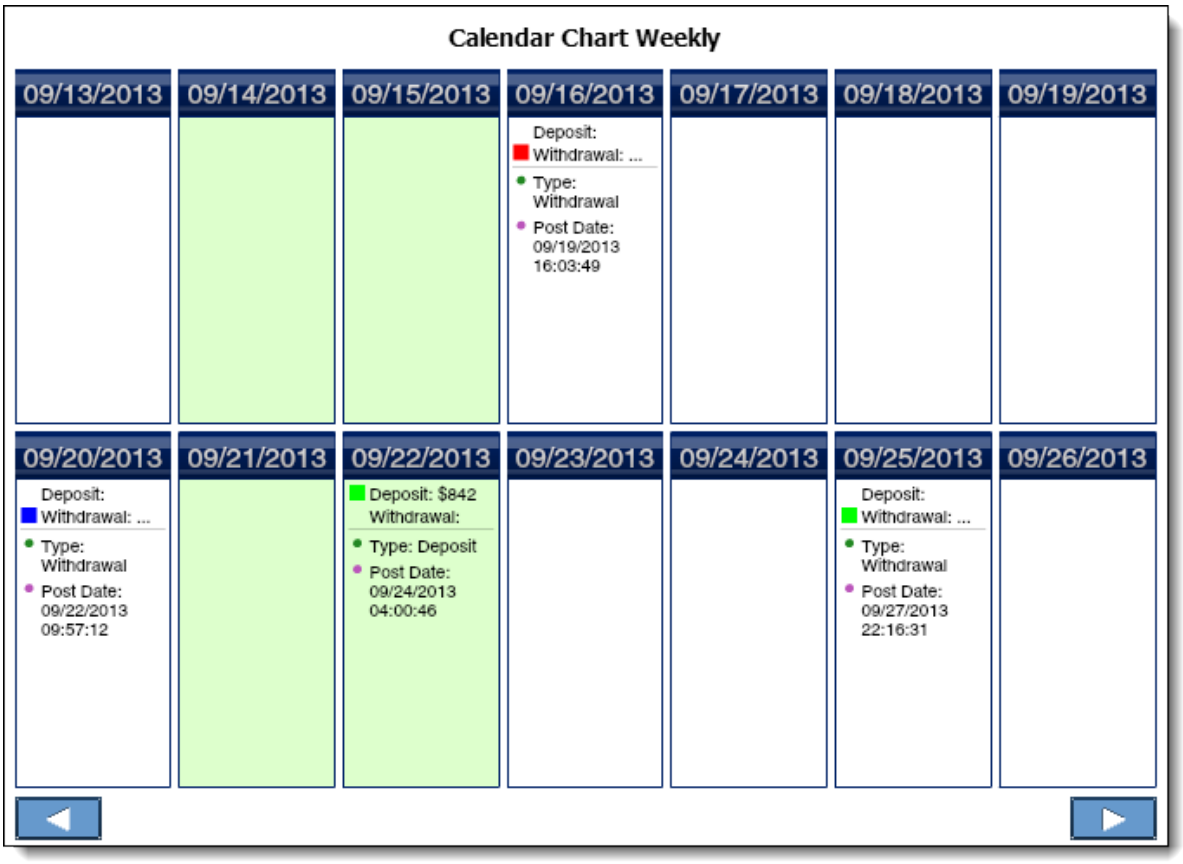


Figure 9-95

9.12.2.4 Daily Calendar

The Daily Calendar chart displays one or more days at a time and can display multiple events for each day. Similar to the other calendar charts, it can display numeric, string and date data. Numeric data will display an associated colored square to show performance against defined range sets. See Section 11.3, "Range Sets" for more information on range sets.

The Daily Calendar chart expects a time element in the date field. Every unique time within the day will display in the chart. If there are multiple rows of data with the same datetime, the chart will use the first datetime occurrence and ignore the others.

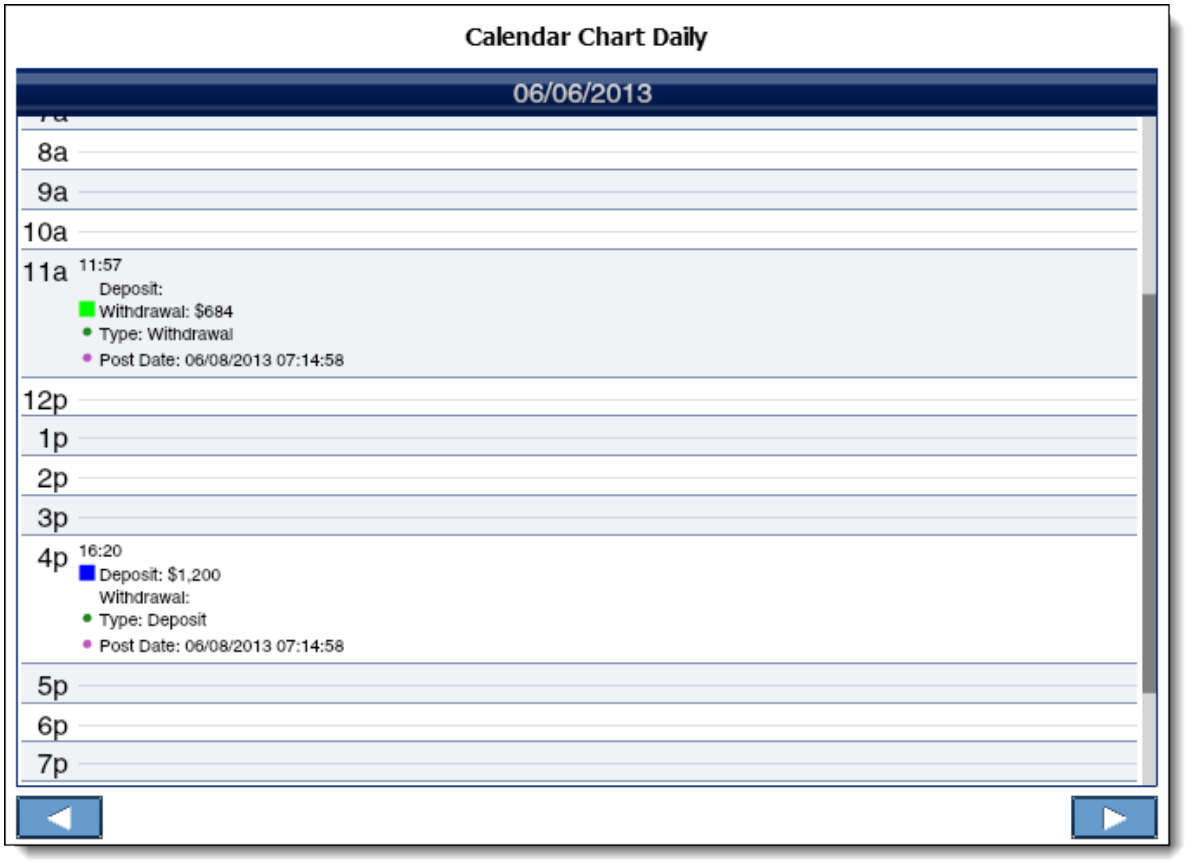


Figure 9-96

9.12.3 Calendar Navigation

All calendar charts provide a navigation feature to advance back and forth between dates (see Figure 9-97). Depending on the chart type it will move the date forward or backward one period of time. For example, a Daily Calendar chart will move the chart one day while a Monthly Calendar chart will move the chart one month. Holding the 'Control' (Ctrl) button on the keyboard while clicking the navigation button will advance multiple periods forward or backwards (see Figure 9-98 and Figure 9-99).

Figure 9-97

Figure 9-98

Figure 9-99

9.12.3.1 Calendar Holiday Settings

Calendar charts can display holidays using a custom color shaded effect on the day. The flexibility to define business-specific holidays is flexible and will depend on your data. Within the Calendar Chart properties, notice the option to set a specific color (see Figure 9-100).

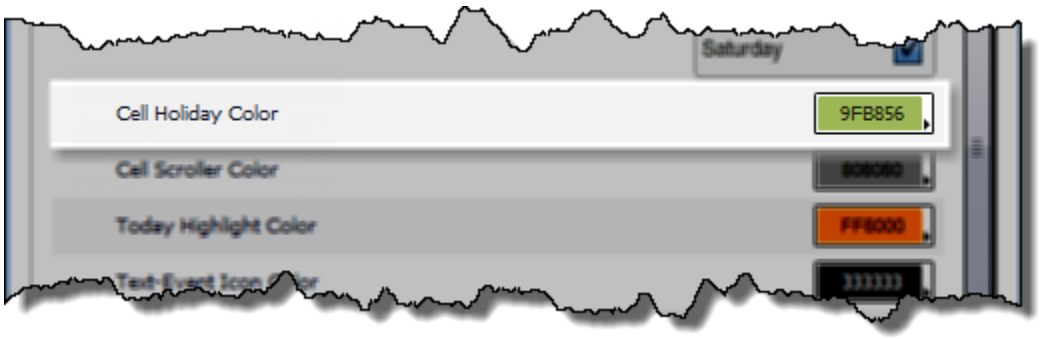


Figure 9-100

To connect your holidays with the chart, there needs to be a Y-axis column labeled 'isholiday' with Boolean values (1 or 0). The iDashboards chart will recognize the axis label 'isholiday' and will ensure the numbers 1 & 0 do not display within the chart; instead, the dates with a '1' will be colored with the 'Cell Holiday Color'. See Figure 9-101 for an example of a Y-axis containing Boolean values to designate each holiday. Then, observe in Figure 9-102 how the Thanksgiving holidays are shaded.

Figure 9-101

Figure 9-102

9.12.3.2 Base Date/Position Selection

When opening a Calendar chart there may be many dates that are returned by the dataset. As part of the chart design, a determination will need to be made as to what set of calendar dates will be displayed first. The Calendar charts offer the ability to select a starting or ending date via three settings: "Base Position", "Custom Date", and "Base Type". These settings should be used in coordination with one another to achieve the desired result. They are accessed by right-clicking and choose 'Chart Properties' (see Figure 9-103).

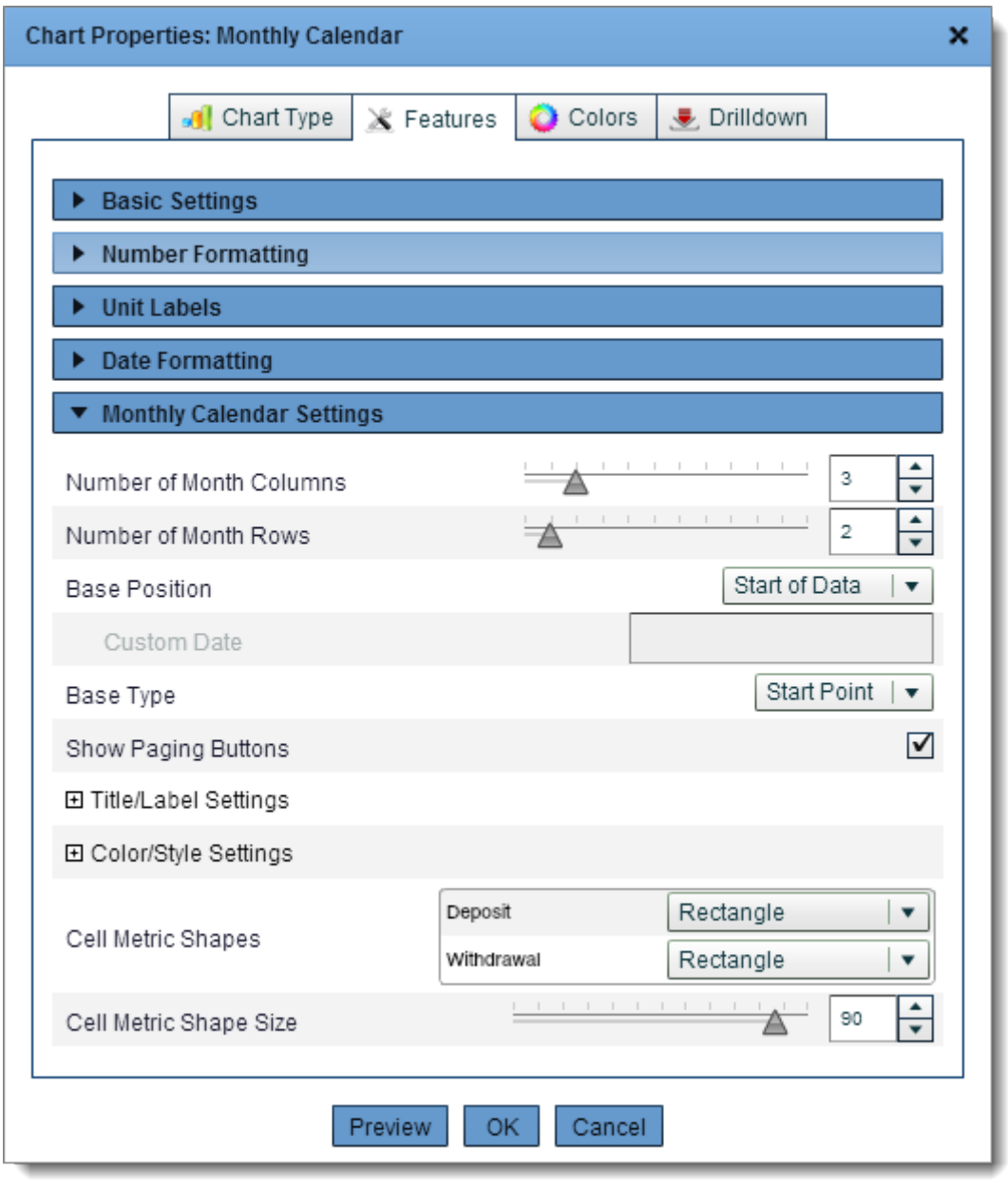


Figure 9-103

The "Base Position" will determine which date the chart will use when it initially loads. This setting provides several options to choose:

- **End of Data** - The latest date available in the dataset.
- **Start of Data** - The earliest date available in the dataset.
- **Yesterday** - The day before the current date.
- **Today** - The current date.

- **Tomorrow** - The day after the current date.
- **Sunday through Saturday** - The nearest weekday, this includes the current date.
- **Custom Date** - The date entered in the "Custom Date" setting.

The "Custom Date" setting becomes available only when the Custom Date option is chosen from the "Base Position" setting. This date value must be entered in the YYYY-MM-DD date format. iDashboards date macros are not allowed in this field.

The "Base Type" setting has two options, Start Point and End Point. These options instruct the graph to use the selected base date/position as either the first or last cell in the Calendar display.

Note: *The Monthly Calendar uses only the month and year portion of a base date. For example, the Monthly Calendar will interpret both 2009-12-01 and 2009-12-29 as a December 2009 base date.*

9.12.3.3 Calendar Drilldowns

A Calendar chart can only be drilled into when there is data for the date clicked on. Clicking on a populated date will trigger the drilldown by sending the x-value (date and time) if a drilldown is configured on the chart. See Chapter 12, "Chart Properties: Drilldowns" for more information on drilldowns.

9.13 Presentation Charts

Presentation charts are unique to any other chart within iDashboards. These charts have the ability to reference data, text and image-references in a graphical format rather than through a numeric-only chart. Their unique ability to display images using interactive intelligence allows dashboards to integrate data with image libraries within a single screen. When creating a presentation chart, the same creation method is used when compared to numeric graphs and charts: X & Y axis requirements, data source, mapping, etc. A requirement for presentation charts to function is to have data which matches the filename of an image file (see Table 5). It is preferred to have the file type extension within the data.

Example data (X or Y axis)	Example image filename
Building6	Building6.png
Building7.jpg	Building7.jpg
SusanneJennings	SusanneJennings.jpeg
Dennis_White.gif	Dennis_White.gif

Table 5

9.13.1 Content Folder

Any images you wish to use within a presentation chart will first need to be uploaded to iDashboards through the Administrator Interface. Images may be stored within sub-folders on the iDashboards server to help with file organization. See the iDashboards Administrator Manual for more information on uploading images.

Each presentation chart has the ability to dynamically display multiple images. The chart designer will need to have a working knowledge of the location of images on the iDashboards server. Below are some examples of how some Image URL's may be referenced (see Table 6).

'Image URL Template' Examples	
Administrator 'Content' location	**URL within chart**
Image at the root level (data has file extension)	`content:${value:Image}`
Image at the root level (data does not have file extension)	`content:${value:Image}.PNG`
Image in a subfolder	`content:blueprints/${value:Image}`
Image in a deep subfolder	`content:blueprints/2d/${value:Image}`
** The word 'Image' is an axis name (X or Y) within the chart	

Table 6

Note: *Image referencing is different with the ViFrame chart due to HTML syntax. See ViFrame section for additional details.*

9.13.2 Content Macro (non-ViFrame chart)

iDashboards provides a content macro which allows you to replace the base URL for your iDashboards installation. The content macro makes referencing images easier. See Table 7 for examples on the standard format for using the content macro.

Example Introduction	Using the macro '`content:`' will replace the iDashboards installation URL
This:	
content:	
Represent this:	
http://www.yourwebserver.com/idashboards/content/ Imagine 'your' URL for iDashboards	

Example 1	Start with the content macro and then suffix with an image name
Use this:	
`content:Building6.PNG`	
To represent this:	
http://www.yourwebserver.com/idashboards/content/Building6.PNG	

Example 2	Same as Example 1, but the image exists in a subfolder called 'blueprints'
Use this:	
`content:blueprints/Building6.PNG`	
To represent this:	
http://www.yourwebserver.com/idashboards/content/blueprints/Building6.PNG	

Example 3	Same as Example 2, but the image name comes from a chart value within the axis labeled "Image". This technique results in an interactive image.
Use this:	
`content:blueprints/${value:Image}`	
To represent this:	
*http://www.yourwebserver.com/idashboards/content/blueprints/**Image Name***	
Imagine 'your' image name	

Table 7

Note: *See Section 12.2.2, "*The Value Macro ${value:<Axis Name>}*" for additional details on the value macro.*

9.13.3 Missing Images

All presentation charts have the option to reference single or multiple images. If an image does not exist, or if a match does not exist between the data and the image directory, the chart will display a broken image icon (see Figure 9-105). This icon does not indicate a broken chart, but it does represent a broken link between the chart and the image it was expecting to reference.

Figure 9-104

9.13.4 ViGallery

The ViGallery chart is used for displaying multiple thumbnail images within rows and columns. iDashboards will first determine the number of rows/columns and thumbnails displayed. Short and wide frames will generally display multiple columns and few rows. Tall and narrow frames will generally display few columns and multiple rows. However, the chart developer can customize each of these settings by configuring the 'Max Frame Row' and 'Max Frame Column' settings. Note the order of images in the following figures.

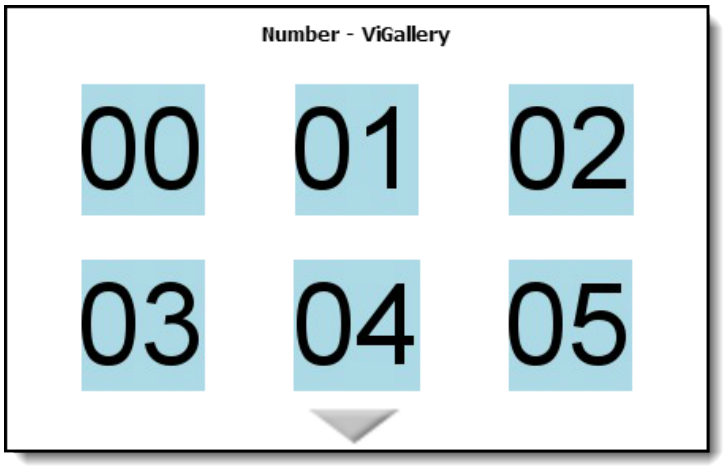


Figure 9-105

9.13.4.1 Scrolling

Because ViGallery charts can link to hundreds of images, it may be necessary to scroll through various pages. Notice the downward facing arrow in Figure 9-105; this indicates a *Vertical* scrolling direction. Clicking this arrow will scroll up/down one row at a time; CTRL-Click will scroll one page at a time, Shift-Click will scroll from beginning to end, and holding the click will auto-scroll at a speed determined within the chart properties. The chart

developer has the option to flip the scrolling direction from Vertical to Horizontal, where the same scrolling functionality but using a left/right direction (see Figure 9-106). Manual scrolling is not necessary if this chart is used with Interactive Intelligence from another chart.

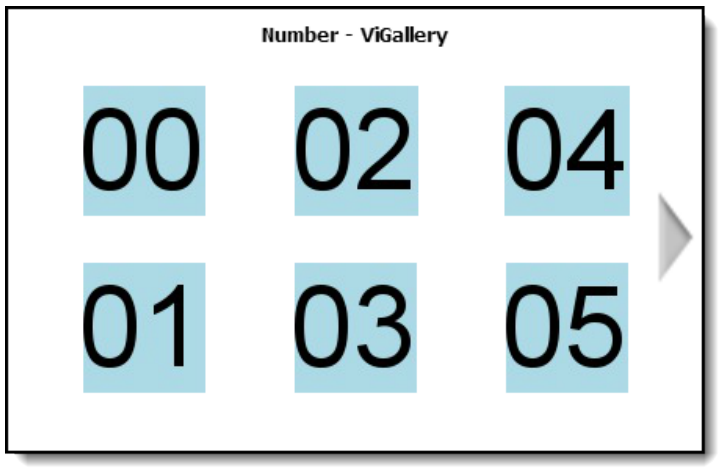


Figure 9-106

9.13.5 Slideshow

The slideshow chart is used for displaying one image at a time. By default, the slideshow buttons (see Figure 9-107) are turned on, allowing the user to click on the 'Forward', 'Backward' or 'Play' buttons. This chart is unique because it can be set to 'Autoplay', potentially driving other charts with the use of interactive intelligence.

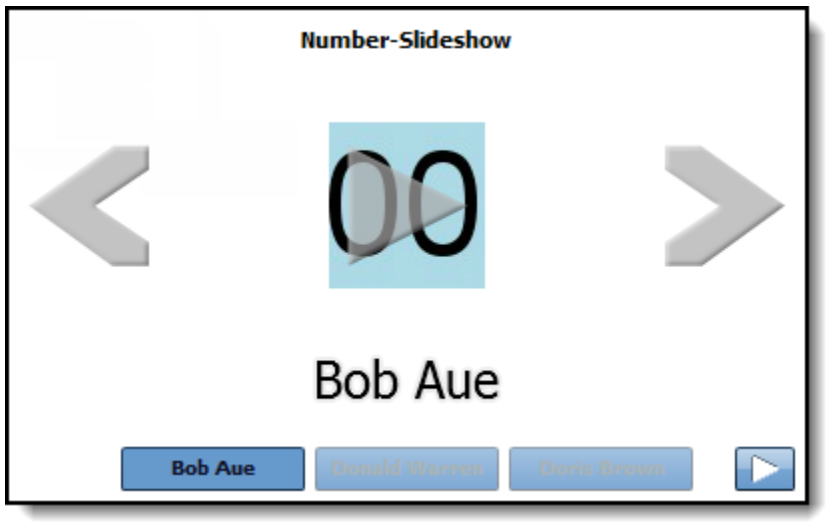
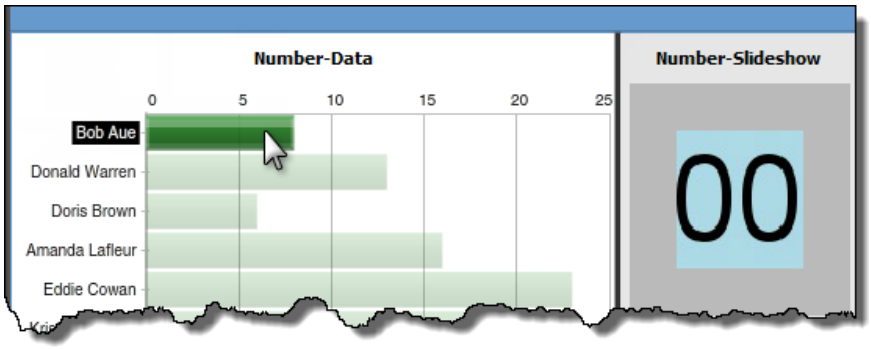


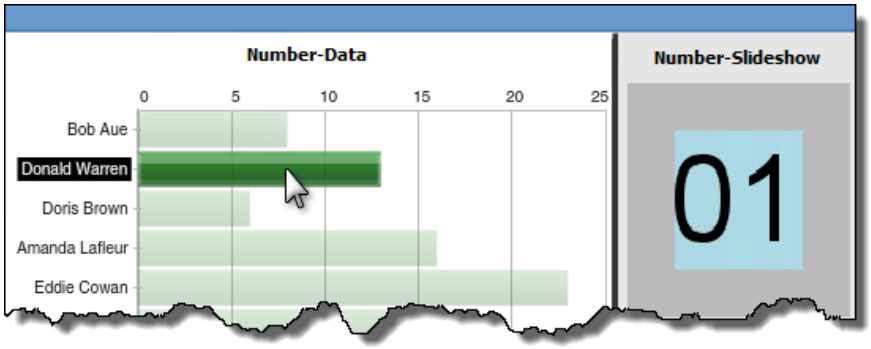
Figure 9-107

Through some customization, a slideshow chart can also display just a single image from a collection of images and automatically change based on interactive intelligence with another chart. In Table 8 observe the relationship between the two charts, and then examine the data structure

Slideshow Example



And then…



Number-Data
(Bar Chart)

X = Name	Y1 = Sale Count
Bob Aue	8
Donald Warren	13
…	…

Number-Slideshow
(Slideshow Chart)

X = Name	Y1 = Image
Bob Aue	00.jpg
Donald Warren	01.jpg
…	…

Image URL Template
`content:/${value:Image}`

Administrator Application Content
(Slideshow Chart)

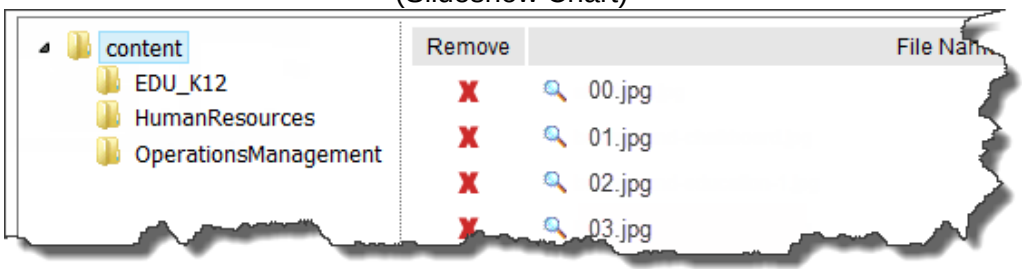


Table 8

9.13.6 ViFrame

'ViFrame' stands for *Visually Interactive Frame*. This chart can display a combination of chart data and unstructured content - including text and images. ViFrame charts have the unique ability to dynamically display data through a visually formatted HTML frame. Users have the option to use the iDashboards Graphic User Interface (GUI) (see Section 15.3.1, "GUI Edit" for formatting details) or the HTML editor (see Section 15.3.2, "HTML Edit" for formatting details). Use the GUI option for easy editing and the HTML option for advanced users. ViFrame charts can show the same scrolling options as a Slideshow chart, or users can change data values with interactive intelligence.

A limited sub-set of HTML can be used within this type of chart giving the end-user the ability embed text, as well as drill out to other websites all based on the ability to provide dynamic data via iDashboards' Macros. Although many HTML features are supported, the chart has limitations like the inability to use CSS and JavaScript.

The following steps show the process to create a ViFrame chart to illustrate the connection between the chart, data, and HTML GUI. The key steps are illustrated below, including a results table showing the usefulness of the chart. To set up a ViFrame chart:

1. Create a chart that contains enough axes to contain your data (see Figure 9-108).

Figure 9-108

   a. Observe the image below to understand the data for this example (see Figure 9-109) (Random text was used in the comment fields).

Figure 9-109

2. When choosing the chart type: Presentations > ViFrame

3. Click on the 'Edit…' button for 'HTML Template'. Enter static text, and then use the function button ${} to help place value macros. Choose from a variety of formatting options for each piece of text (see Figure 9-110).

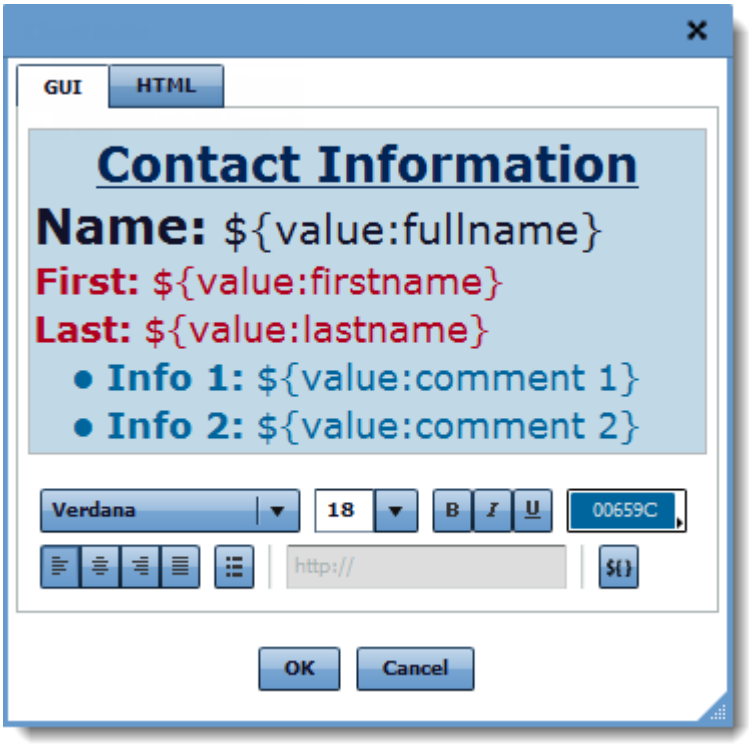


Figure 9-110

4. When finished, the chart will appear with slideshow-type scrolling options, including the option to auto-play. Like all presentation charts, the values can change using interactive intelligence with other charts on the same dashboard (see Figure 9-111).

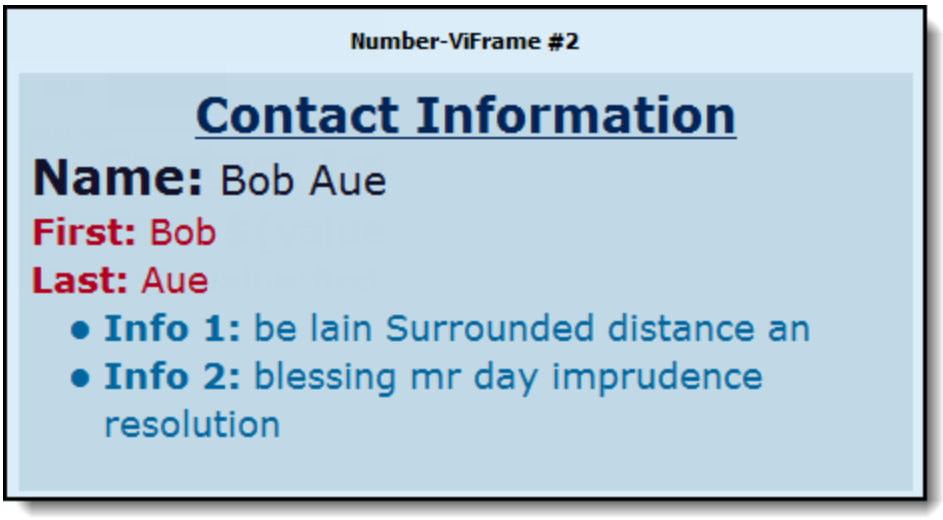
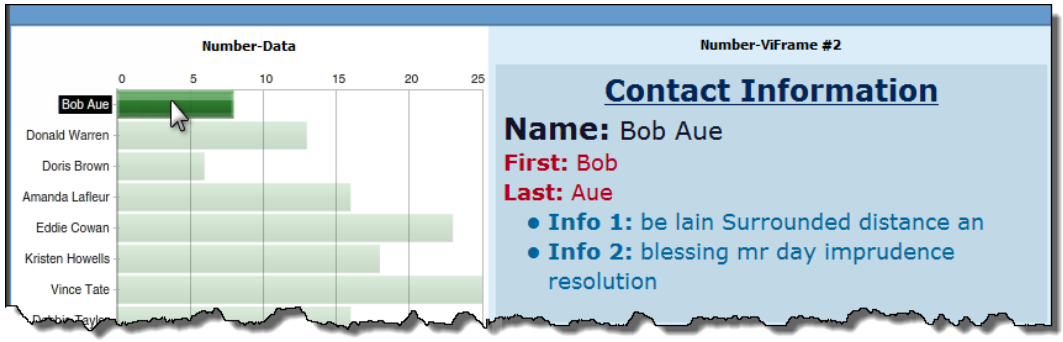


Figure 9-111

5. In Table 9, observe the relationship between the two charts.

ViFrame Example



And then…

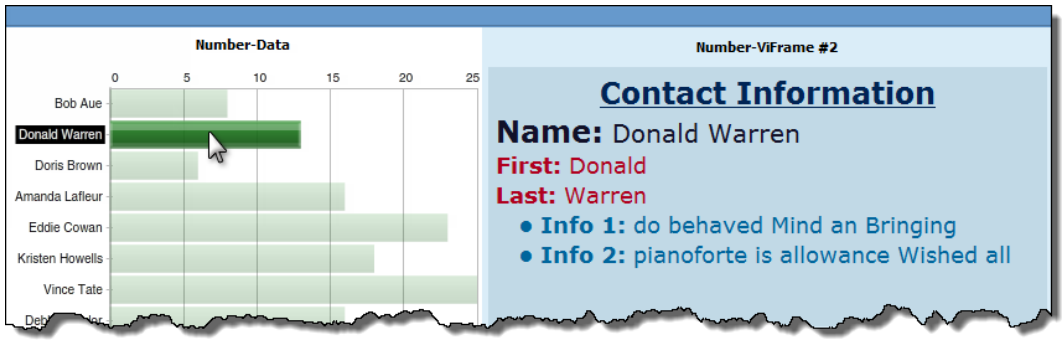


Table 9

9.13.6.1 ViFrame Images

The ViFrame chart does not use the same image referencing as the Slideshow or ViGallery chart. Because the ViFrame is essentially an HTML editor, the chart-builder must enter the HTML tag that will control image placement and properties within the chart (see Section 15.3.2, “HTML Edit” for formatting details).

The minimum requirement for placing an image into a ViFrame, using the HTML option looks like:

```
<IMG SRC="${content}/<image information>">
```

where the bold text above is replaced with image information. Then the chart-builder could modify the image tag to modify the image properties.

```
<IMG SRC="${content}/Building6.PNG">

                              Or…
<IMG SRC="${content}/blueprints/Building6.PNG">

                              Or…
<IMG SRC="${content}/${value:Image}">

                              Or…
<IMG SRC="${content}/${value:Image}" WIDTH="75" HEIGHT="75">
```

9.14 Map Charts

Map charts are pre-defined charts within iDashboards. If chart data contains geographic labels, like US state names, that data can be used on a map of the USA. To represent data in a map chart, the X-axis values must coincide with the map you are using. The X-axis needs to be the geographic label and the Y-axis needs to be a numeric value. If multiple Y-axes are used, then the map will display navigation arrows which allow the map to cycle through each axis (see Table 10).

Map Axis Examples		
Type of Map	**X-Axis Connection**	**X-Axis Data Example**
World map	X-axis contains continent names	Africa Asia Europe North America
Continent map	X-axis contains country names	South Africa South Korea Sweden Taiwan USA
Country map	X-axis contains local region names (ex. state names/abb)	AL Alabama AK Alaska AR Arkansas AZ Arizona CA California CO Colorado OR
US State map	X-axis contains county names	Leelanau Macomb Oakland Washtenaw Wayne

Table 10

Map charts work by changing the color of various regions (states, countries, continents, etc.) based on the values they are pulling from their data source and the predefined Color Ranges you configure (see Figure 9-112). See Section 11.3, "Range Sets" for more information on range sets.

Note: *For custom maps, refer to the iDashboards Administrator's Manual.*

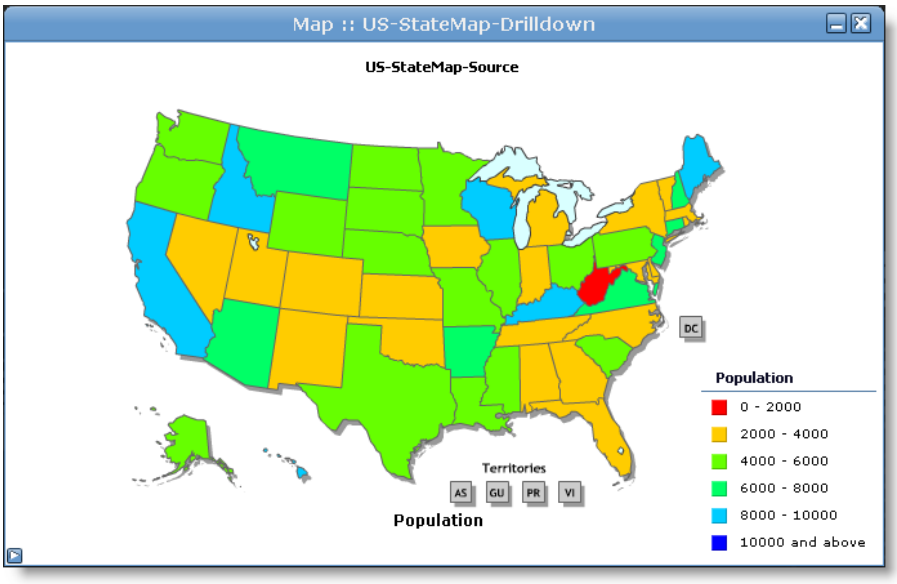


Figure 9-112

9.14.1 Maps

- **World with Continents** - Mercator projection of the world. Divided into the seven continents. No countries or cities.
- **World with Countries** - Mercator projection of the world. Divided into countries.
- **Africa** - Map of Africa, showing its countries. No cities.
- **Antarctica** - Map of Antarctica.
- **Asia** - Map of Asia, showing its countries. No cities.
- **Europe** - Map of Europe, showing its countries. No cities.
- **North America** - Map of North America, showing its countries. No cities.
- **Oceania** - Map of Oceania, showing its countries. No cities.
- **South America** - Map of South America, showing its countries. No cities.
- **Canada** - Map of Canada, showing 13 provinces with option to display up to 18 cities.
- **USA** - Map of the United States, showing 50 states and 81 cities.
  Currently, the chart type recognizes following US metro areas: Atlanta, Austin, Baltimore, Boise, Boston, Buffalo, Charleston, Charlotte, Chicago, Cincinnati, Cleveland, Columbia, Columbus, Dallas, Denver, Des Moines, Detroit, Fargo, Flagstaff, Houston, Indianapolis, Jacksonville, Kansas City, Knoxville, Lincoln, Louisville, Las Vegas, Los Angeles, Manchester, Memphis, Miami, Milwaukee, Minneapolis, Nashville, New Orleans, New York City, Newark, Norfolk, Norwalk, Oklahoma City, Omaha, Pittsburgh, Philadelphia, Phoenix, Portland, Providence, Richmond, Raleigh, Salt Lake City, San Diego, San Francisco, San Jose, Savannah, Seattle, Sioux Falls, Spokane, Suffolk, Stamford, St. Louis, Tampa, and Washington DC.

- **USA and Territories** - Map of the United States, showing 50 states and four territories with option to display up to 81 cities.

9.14.2 Map Options

All map charts share a common set of visual properties. Options include the ability to show, full time, X and Y axis values in the geographic regions; or the ability to choose which axis to display. The default map properties are shown below (see Figure 9-113) and multiple display examples can be seen in Table 11.

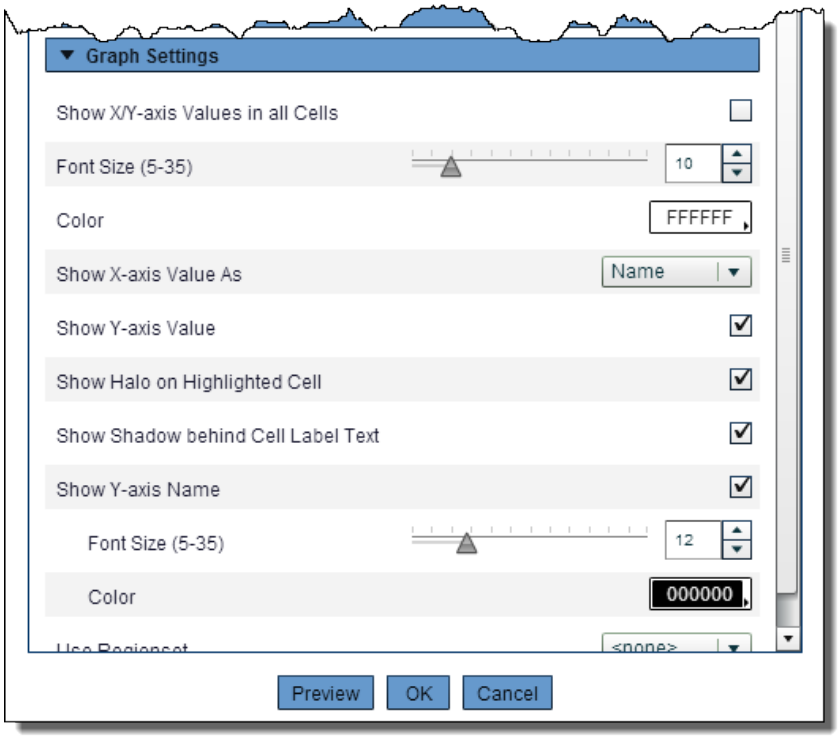


Figure 9-113

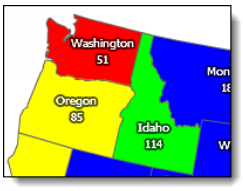
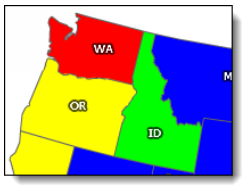
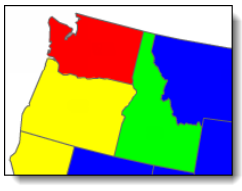
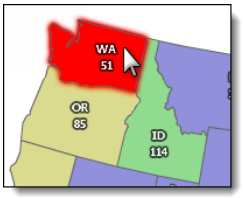
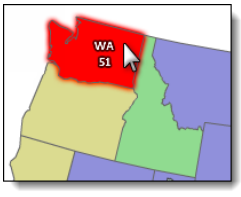
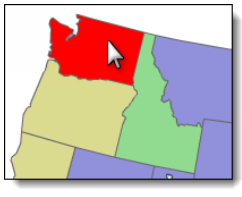
Value Display Examples				
No Mouse				
With Mouse				

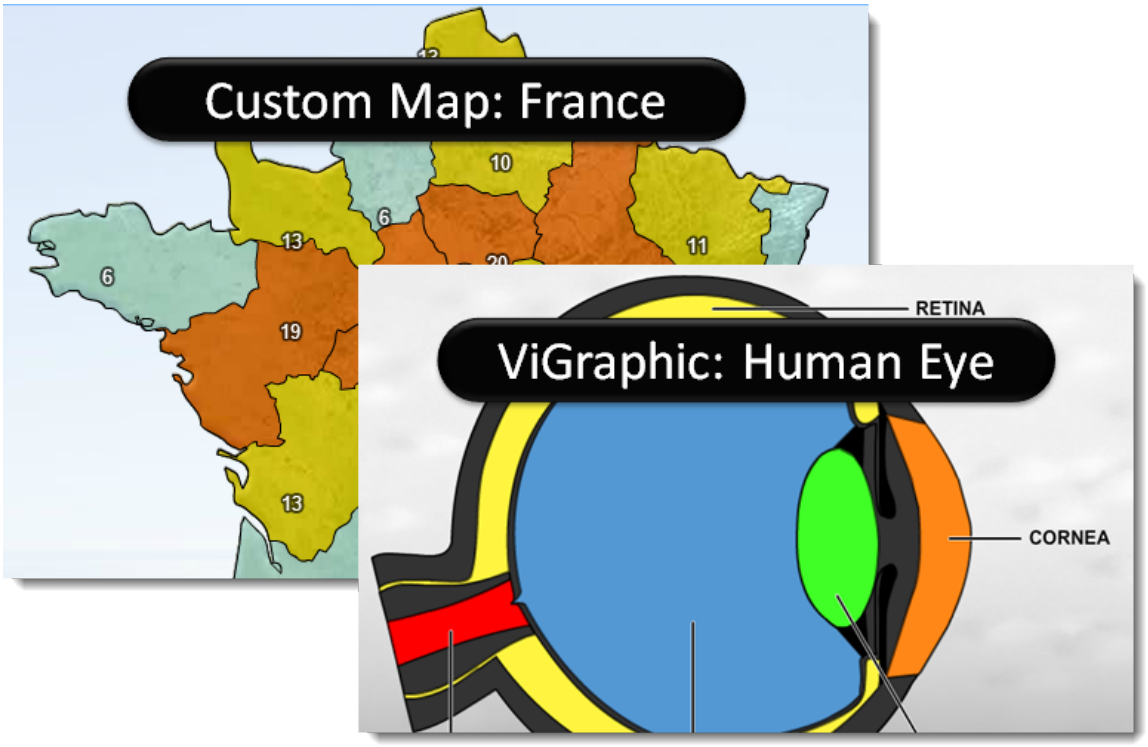
Table 11

9.15 Custom Maps and ViGraphics

A ViGraphic or Custom Map chart development project commissions iDashboards Developers to create a new chart for the customer that can be uploaded to their iDashboards installation and be used an unlimited number of times within their dashboards. Functionally, ViGraphic charts and Custom Map charts behave the same, but differ in the graphical content they display, as outlined below. The customer defines the design of the chart and upon payment and project completion, the new chart is the property of the customer.

Custom Map Charts – Custom developed charts utilizing recognized geographic regions. Examples might include new country maps, sales region boundaries in the US, corporate office locations in Europe, etc.

ViGraphic Charts – Custom developed charts of graphical illustrations. Examples might include seating at a sports area, a room layout of a building, an airplane seating chart, a diagram of the human body, etc.



Contact iDashboards for more information on Custom Maps and ViGraphics.

10. Chart Properties: Chart Features

Chart Properties determine the various display characteristics/settings of the chart, such as- Chart type, Chart colors, Background Color, and many other display options within the chart. This feature allows you to change any of the chart settings.

Note: *If you don't have Save permission for a chart, you may still change that chart's properties but cannot save those properties. Those changes will be effective locally only for your dashboard display. You may, however, save it as a different chart within a Category for which you have Save privilege such as your Personal category.*

To access the Chart Feature options, right-click on a chart and select the 'Chart Properties…' option from the right-click menu. Then, from the Chart Properties window, select the 'Features' tab. Alternatively, click 'Chart Properties > Features…' from the Chart Menu button of the desired frame. A wide collection of chart features is available to choose from. Chart Features are organized among Basic Settings, Number Formatting, Units Labels, Date Formatting and "Chart Specific" settings. The first four groups of settings are common among all chart types. The "Chart Specific" settings group is unique for each chart type.

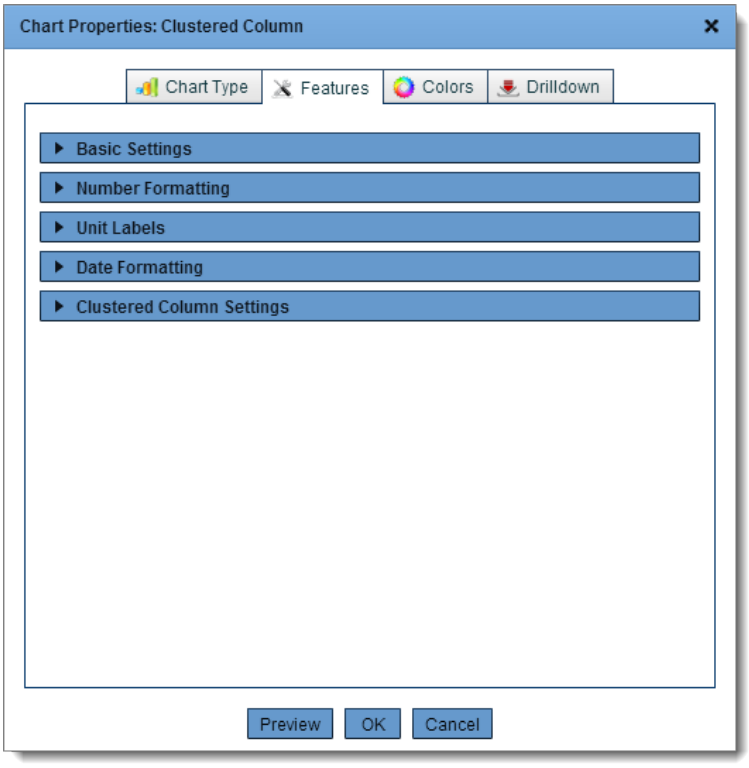


Figure 10-1

10.1 Basic Settings

Basic Settings are available for all charts regardless of the chart type. These settings allow you to change chart features such as title appearance, legend appearance, mouse-over value, note appearance, sort order, chart refresh interval, etc. (see Figure 10-2).

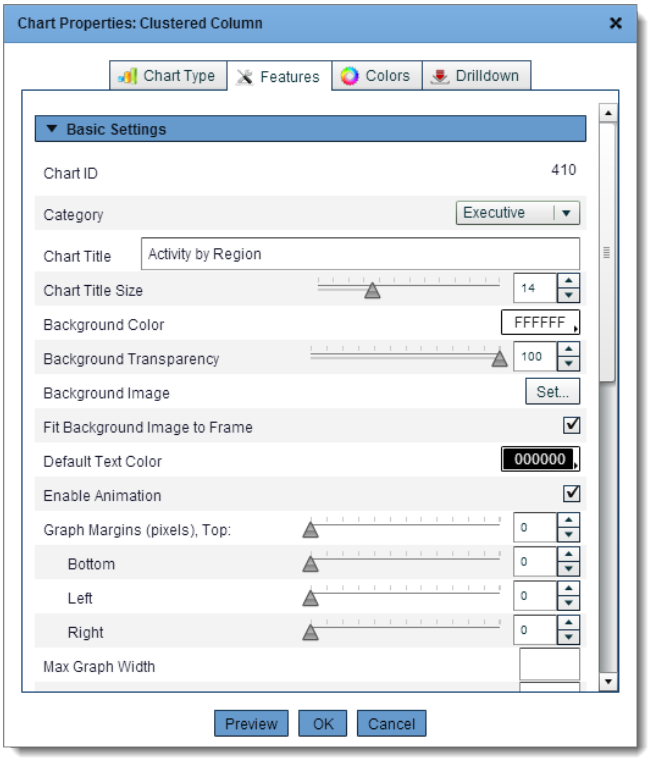


Figure 10-2

10.1.1 Moving Chart to other Categories

A user can move an existing chart to another category by changing the Category dropdown box in the 'Basic Settings' tab. The dropdown will contain all categories for which the user has "Save" access (see Figure 10-3). Users must save the chart after selecting a new category from the dropdown for the category change to take effect.

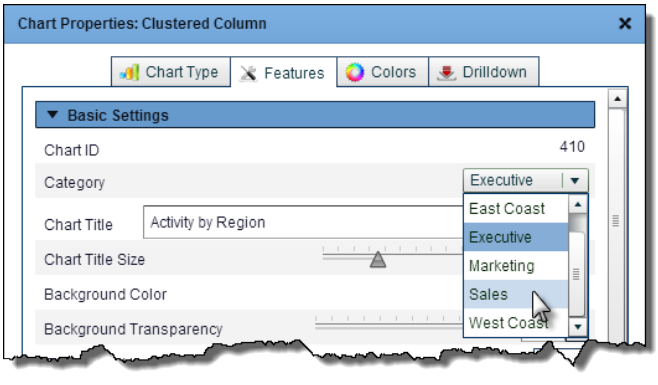


Figure 10-3

10.1.2 Chart Title & Size

The title of a chart can be entered into the 'Chart Title' text box. A user can also create/edit the title of a chart by doing a 'Save As …' on the chart and editing the title there. The chart title font size is controlled by adjusting the 'Chart Title Size' slider bar or editing the numerical value of the font size itself.

10.1.3 Chart Background Color

The chart background and default text color can be controlled under Basic Settings as well the 'Colors' tab.

10.1.4 Chart Background Transparency

This setting allows the user to set the transparency percentage of the chart background. If it is set to 0, then the chart will display the chart background color. If it is set to 100, then any dashboard color or image will show through the chart background.

10.1.5 Chart Background Image

Click the "Set…" button. Any chart can set the background image for the frame. Setting the transparency and stretching of the image is easily controlled with two options. Background Transparency settings will control transparency of the background color. If left at zero, the chart background image will not be displayed. To view the image, increase the transparency. Setting the value to 100% will ignore the chart background color to display the pure image.

An image selection window will appear, allowing an image to be selected from the iDashboards server. Navigate the content folders on the left and select the file. Before applying the image, a user can click the 'Preview' button to see a preview of the image. Supported file types are .**PNG**, .**JPEG**, and .**GIF** formats.

Note: *Images can be uploaded to iDashboards through the Administrator Interface. This will cause the image to appear in the selection window. Images may also be referenced by URL, but this setting requires the Administrator to enable the Proxy Server or Cross-Domain policy. See the Administrator manual for details on adjusting these settings.*

10.1.5.1 Fit Chart Background Image to Frame

By default the chart background image will stretch to fill the entire frame. A checkbox controls this setting which allows for stretched or native image display. If the option is turned off, the image will display at the native resolution.

10.1.6 Color Layers and Transparency

Regardless of background color or background image, the chart data and graphics will always be presented on the 'top' layer. If an image file is '.PNG' format then the image can contain transparency features. Using images with transparencies allow for 'lower' layers to be seen by the user (like dashboard background images and dashboard background colors.) Illustrated below is the layer sequence (See Figure 10-4).

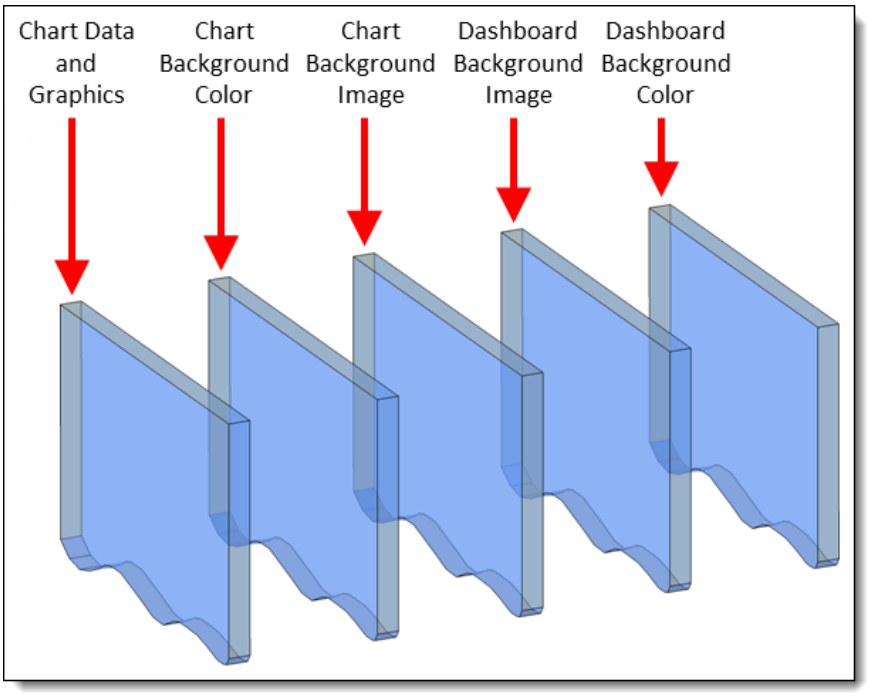


Figure 10-4

10.1.7 Animation

By default, every chart has its own unique animation when the chart is first opened or refreshed. This animation can be turned off by un-checking the 'Enable Animation' checkbox.

10.1.8 Graph Margins

Graph Margins allow for padding of whitespace in the regions above, below, to the right, and to the left of a chart. The padding above the chart will always be below the title to keep the title at the top of the dashboard frame.

Figure 10-5 has a legend that has a grey background and covers part of the chart.

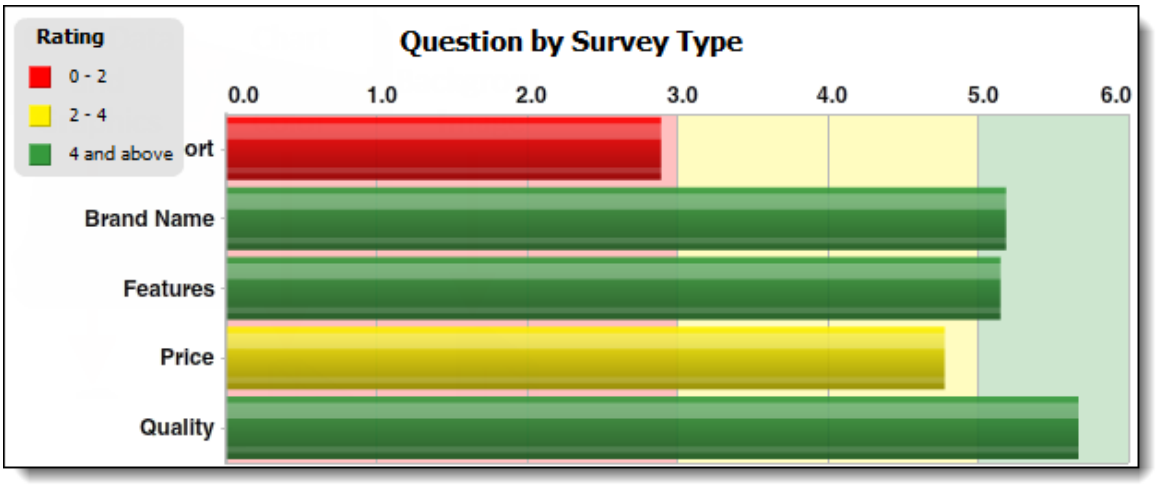


Figure 10-5

By changing the top Chart Margin to 50 pixels and the left Chart Margin to 100 pixels the same chart can contain the whole Legend and chart without blocking any of the chart's data points (see Figure 10-6).

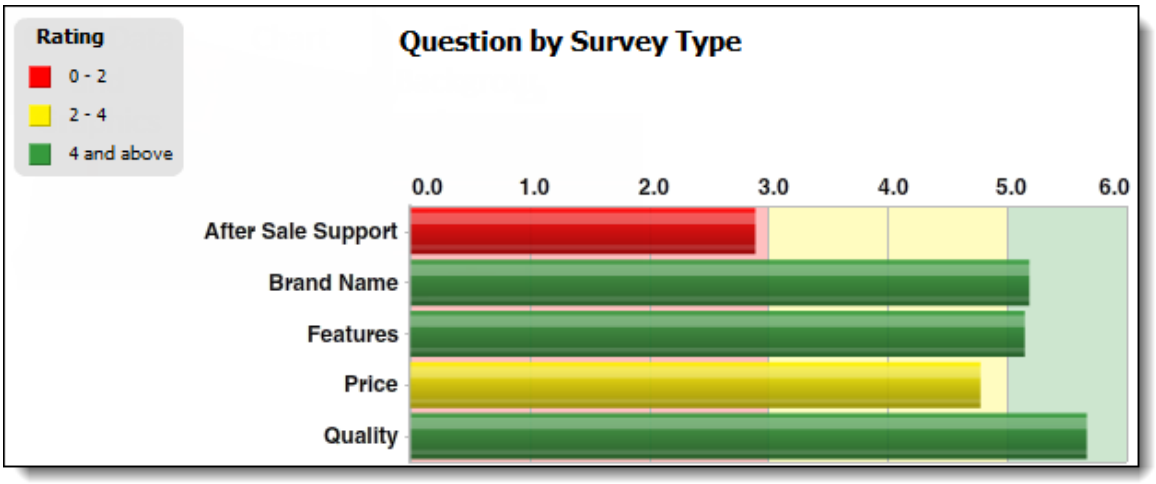


Figure 10-6

Resizing the frame borders or browser will always stretch/shrink the size of the chart, but will always keep the same margin values.

Note: *The chart can only be forced down to a size of 100 pixels by 100 pixels.*

10.1.9 Max Graph Width/Height

As an alternative to adjusting the graph margins, which always change the size of the displayed charts, a user can adjust the maximum graph width or height. Setting the 'Max Graph Width' or 'Max Graph Height' will restrict a chart from growing beyond a set size. By default, both values are set to '0' (zero), indicating the property is not being used. Below is an example of a chart with the settings 'width = 400' and 'height = 200'. A grid has been placed over the screen capture for illustration purposes only. The first screen capture in Figure 10-7 shows the chart within a small frame. The same chart in Figure 10-8 shows a larger frame size, but the same dimensions (width = 400, height = 200). By default, the chart will remain centered within the frame; however, chart margins can be adjusted to position the chart in an offset location.

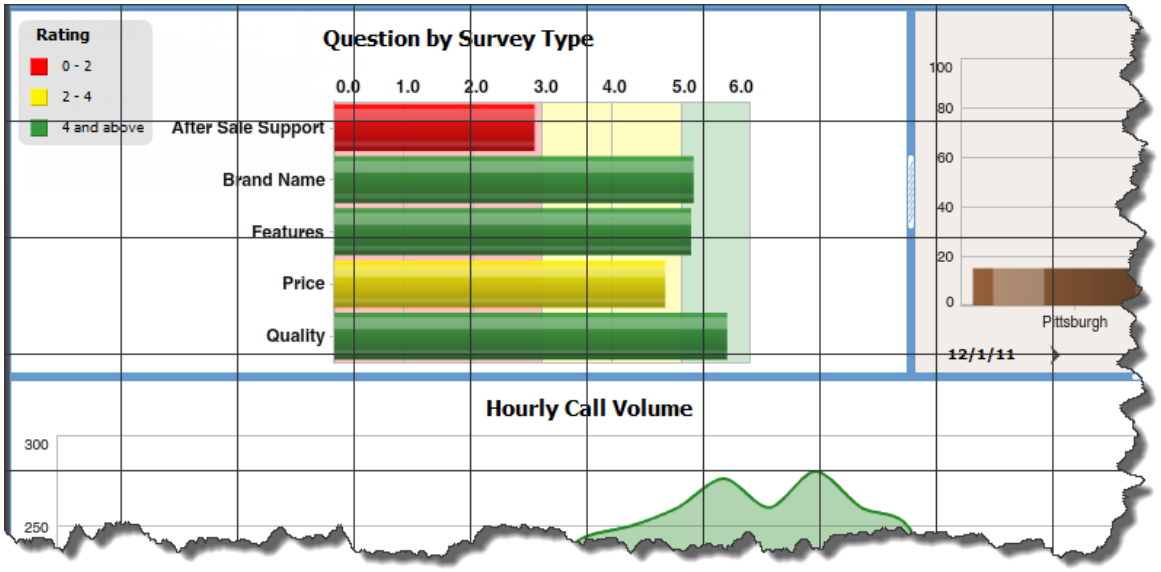


Figure 10-7

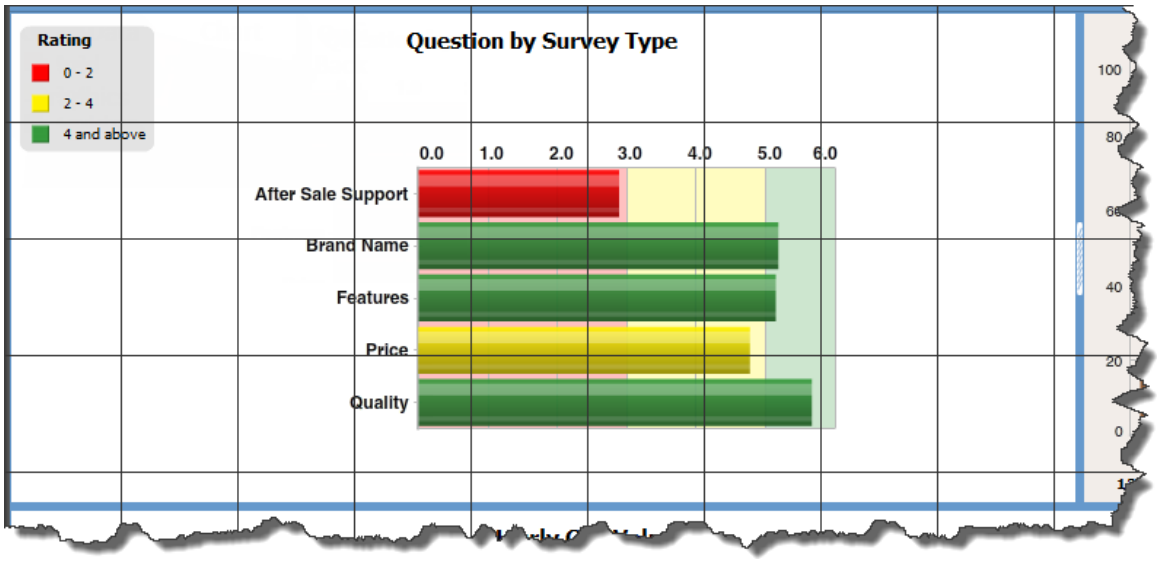


Figure 10-8

10.1.10 Chart Legend Controls

By default, the chart legend box is displayed next to a chart and displays the chart labels with their associated colors (see Figure 10-9).

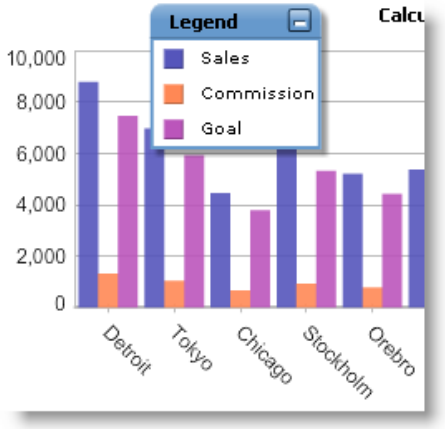


Figure 10-9

A user can control the following legend settings through the Chart Features dialog:

1. Ability to display (maximize) the legend (see Figure 10-10).
2. Ability to minimize the legend down to an icon in the chart frame (see Figure 10-11).
3. Ability to completely hide the legend.
4. Ability to drag and place the legend anywhere within the chart frame area. The legend title bar appears only upon mouse-over and serves as the handle to drag and position legend box.
5. Ability to specify legend background color, text color and the degree of transparency of the legend box, from 0 to 100%.

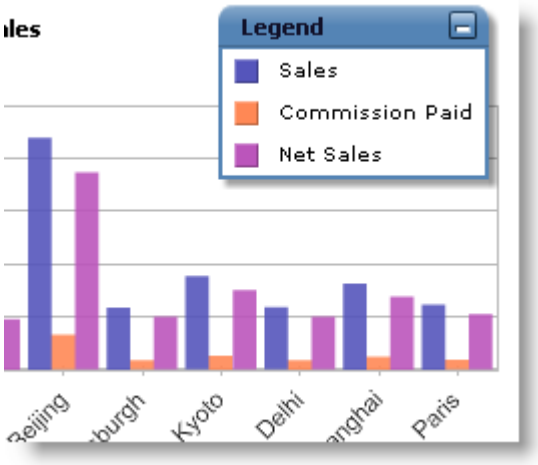


Figure 10-10

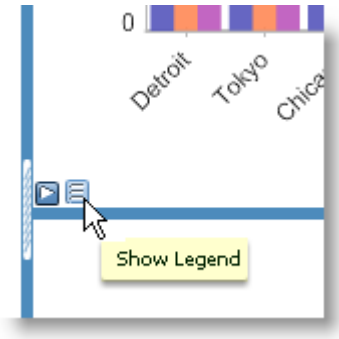


Figure 10-11

There is a second legend that can be displayed or hidden on a chart. This legend is called a "ribbon legend" and is controlled by the 'Show Ribbon Legend' checkbox. When turned on, a ribbon legend is displayed at the top for the chart display area when a user places the cursor over an X-axis value in the chart. The ribbon legend will display the Y-axis values pertaining to that X-axis data points (see Figure 10-12).

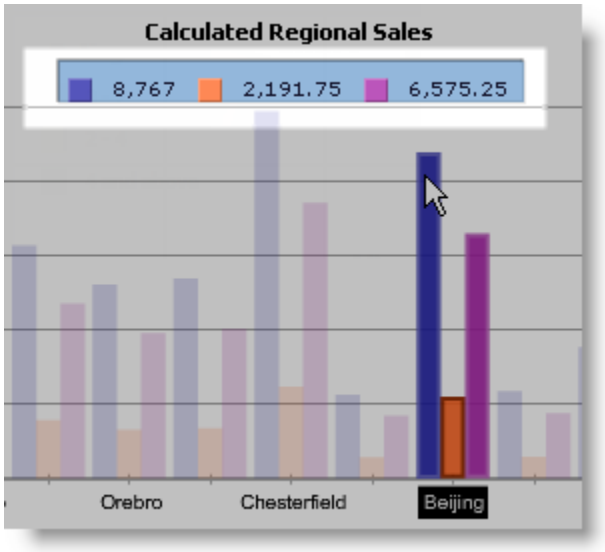


Figure 10-12

10.1.11 Mouse-Over Value Display

When a user places the mouse cursor over a chart, most chart types will display a small pop-up that contains the chart label(s) and their associated values for the X-axis data point they are hovering over (see Figure 10-13). This is default functionality by design. However, under certain circumstances (such as too many data points on the chart or a pie chart where data is already visible on the slices), a user may want to turn this pop-up off. The 'Show Mouse-over Value' checkbox of the Chart Features tab allows you to turn on/off the mouse-over pop-up (see Figure 10-14).

Note the "Office Manager" label in Figure 10-13. This is a string-based Y-axis. Since it is a string, no value for it can be displayed in the column chart (only numeric data can be displayed). However, it is displayed in the pop-up. This functionality allows you to add text for each X-axis value that is only displayed when you mouse-over the values.

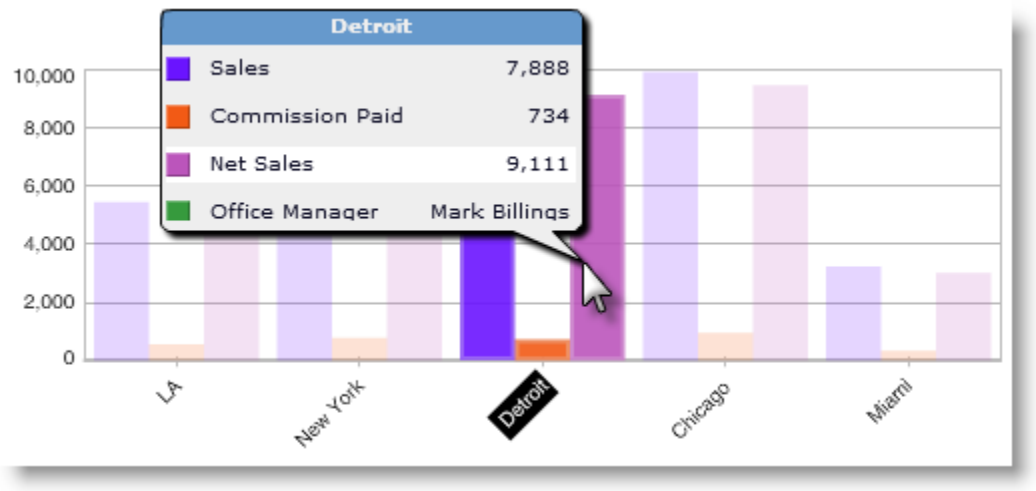


Figure 10-13

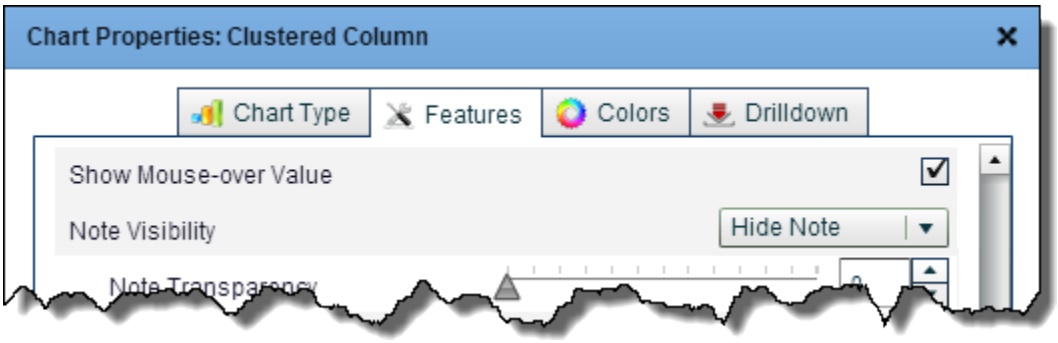


Figure 10-14

10.1.12 Chart Notes

The Business User, Analyst or Admin roles may also use the "Chart Note" feature to display a custom note about the chart's state (such as "low is good" or "high is bad"). Chart Notes simulate a "sticky note" behavior.

To display a Chart Note on a chart, simply choose "Show Note" in the *Note Visibility* dropdown in Chart Features (see Figure 10-15). A background color and transparency level can also be configured in the Basic Settings section (the note color can also be configured in the 'Colors' tab). The Chart Note can be dragged around and placed anywhere within the chart frame. Both the Note's header title and description are editable. The combined length of the Note title and description should not exceed 450 characters. On the lower right corner, the resize handle can be clicked and dragged to resize the dimensions of the box (see Figure 10-16).

Note: *A chart cannot have more than one* Note

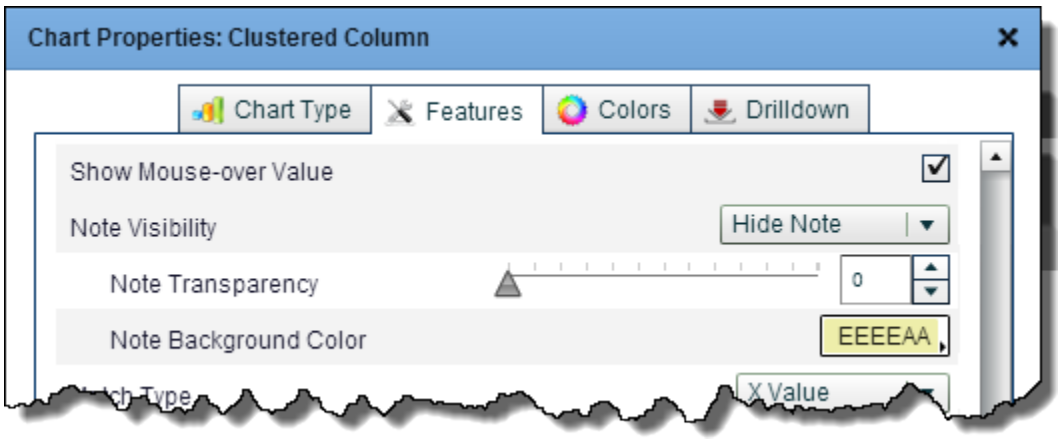


Figure 10-15

Figure 10-16

10.1.13 Match Type

Matching Flags help manage the underlying matching rules that in-turn control the visual display of related data points within the same chart and across different charts. See Section 5.10, “Synchronized Highlighting” for more information.

10.1.14 Sort

Sorting allows chart data to be sorted in a pre-defined order. The data can be sorted ascending, (a-z, 1-10) or descending (z-a, 10-1). Chart data can be sorted on any column by choosing the column in the “Sort On” dropdown menu (see Figure 10-17). Leaving the “Sort On” dropdown blank will draw a chart without sorting, instead pulling the data in the order the data is retrieved from the data source. Figure 10-18 displays unsorted data and Figure 10-19 displays data sorted by city in ascending order.

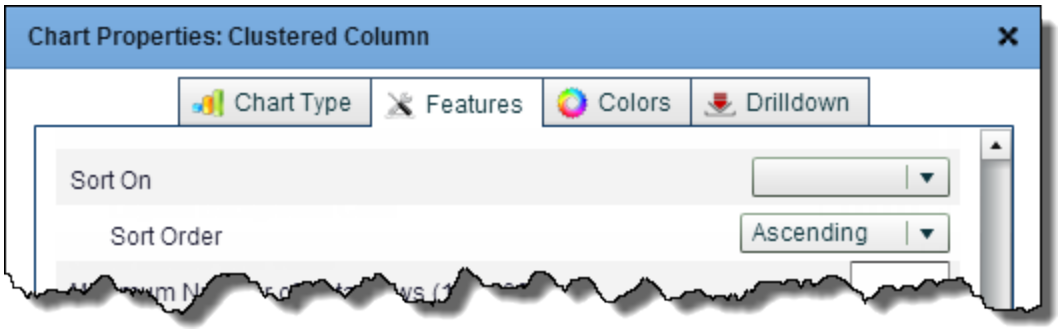


Figure 10-17

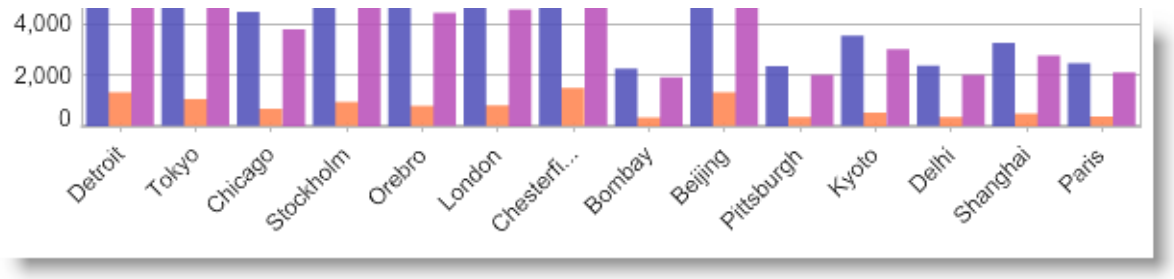


Figure 10-18

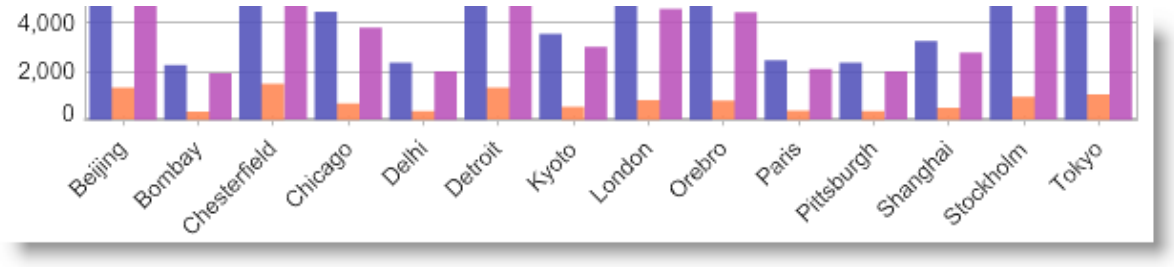


Figure 10-19

10.1.15 Chart Refresh

The Auto-refresh option in the chart 'Basic Settings' (see Figure 10-20) allows the chart to be refreshed automatically at the time interval specified (in minutes). The chart will not refresh if the "Refresh Interval (Minutes)" is set to 0 (zero). The "Refresh Interval (Minutes)" can be any value from 1 to 9999 and must be a whole number. After applying the refresh interval, a message will appear notifying you to save the chart. The chart must be saved for this setting to take effect.

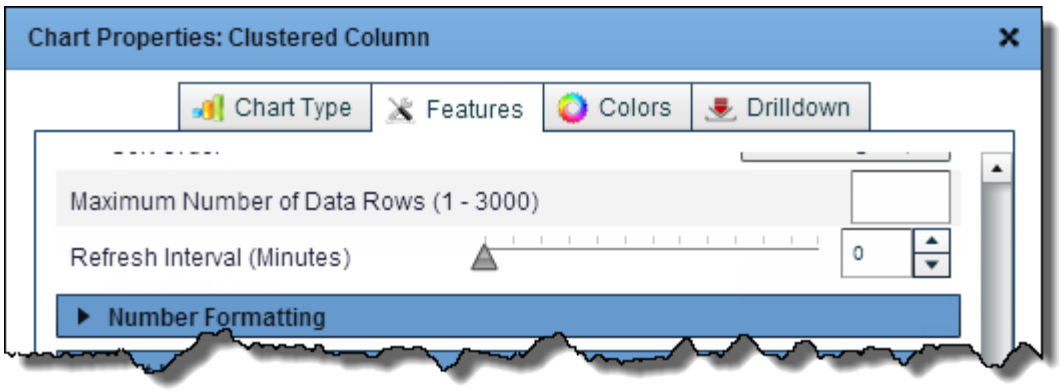


Figure 10-20

10.1.16 Chart Pivots

The available Pivot options will only show up in Chart Features if the chart you are working on contains one or more pivots (see Figure 10-21). Detailed information about configuring these options can be found in Chapter 16, “Advanced Chart Features”.

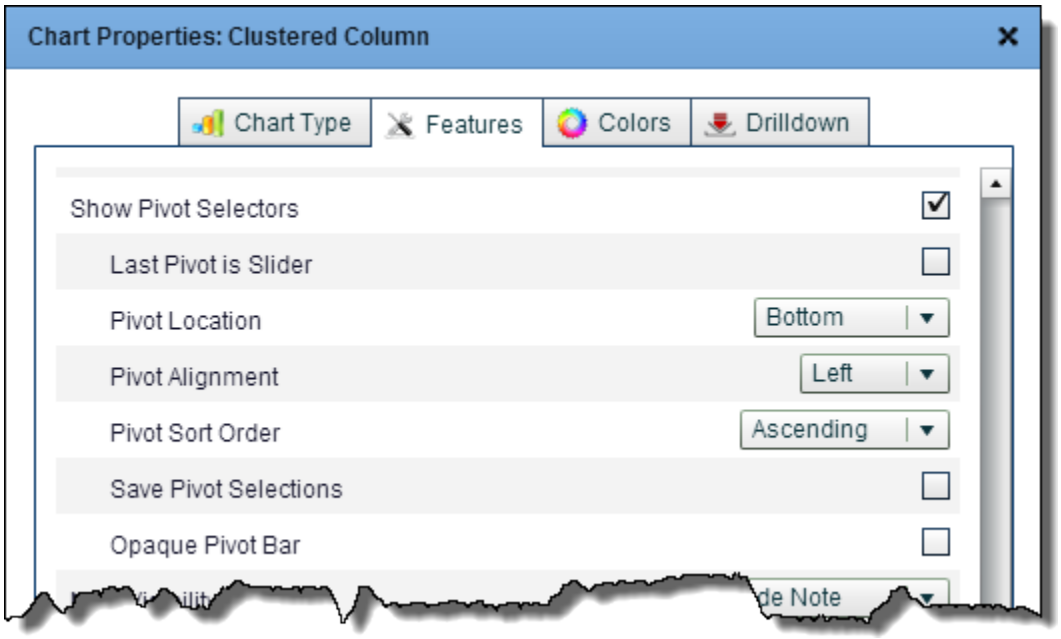


Figure 10-21

10.1.17 Maximum Number of Data Rows

The purpose of the ‘Maximum Number of Data Rows’ feature is to limit the number of rows returned from a chart’s data source (see Figure 10-22). This will allow the user to create a chart that will display such things as the ‘Top X’ or ‘Bottom X’ rows of data from a data source. For example, a user may want to create a chart that only returns the Top 5 sales associates based on sales volume from a department of 100 sales associates. In this case the user can set the ‘Maximum Number of Data Rows’ setting to 5, resulting in a dataset consisting of only the first 5 rows from the data source. To achieve the actual top 5 associates based on sales the dataset would need to be properly sorted in the data source

so that the first 5 rows were also the 5 associates with the highest sales volume. This would be a descending sort on sales volume in the data source.

***Note**: Sorting can also be performed via the 'Sort On' chart property, however this sorting takes place after the 'Maximum Number of Data Rows' dataset has been returned to the client and will thus sort only the 5 values returned, which may not be the intended values.*

The 'Maximum Number of Data Rows' will also allow you to prevent the 'max rows exceeded' error from displaying when the number of rows for a given chart exceeds system-defined limitations for both pivoted and non-pivoted charts. In many cases, a cropped dataset by iDashboards may be an expected result, and an error alerting the user to this issue may not be desired. In general, on any pivoted or non-pivoted chart the 'Maximum Number of Data Rows' option can be set equal to the respective system-defined limitations resulting in the same dataset being returned as would be if 'Maximum Number of Data Rows' was not configured, however in this case the user will not be presented with an error notifying them that the maximum number of rows has been exceeded.

By default, the 'Maximum Number of Data Rows' setting is blank and will result in all of a given chart's data being returned up to the iDashboards system-defined limitations for pivoted/non-pivoted charts. If populated, however, the value can be any integer from 1 to 3000 and will limit the number of rows returned to the chart accordingly. If the 'Maximum Number of Data Rows' setting exceeds the system-defined limitation for the number of rows that can be returned, the 'Maximum Number of Data Rows' value will be ignored (without error) and the system-defined limitation will instead be enforced.

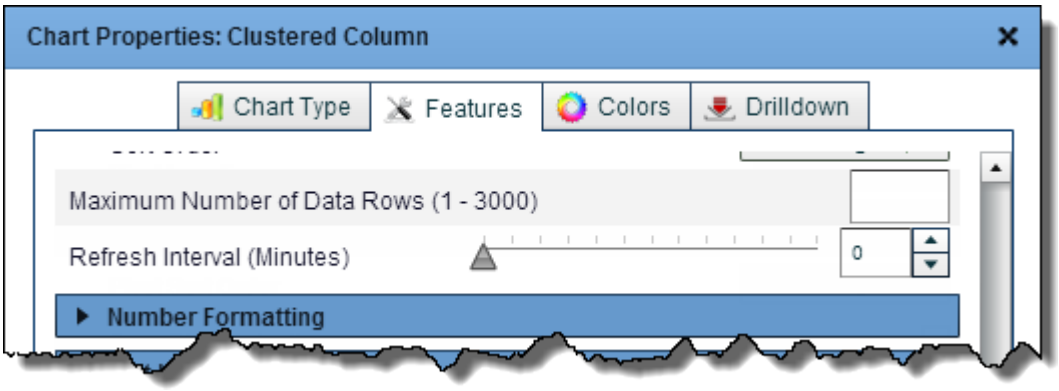


Figure 10-22

10.2 Number Formatting

Number Settings are available for all charts regardless of the chart type. These settings help you configure how a chart displays number formats (see Figure 10-23).

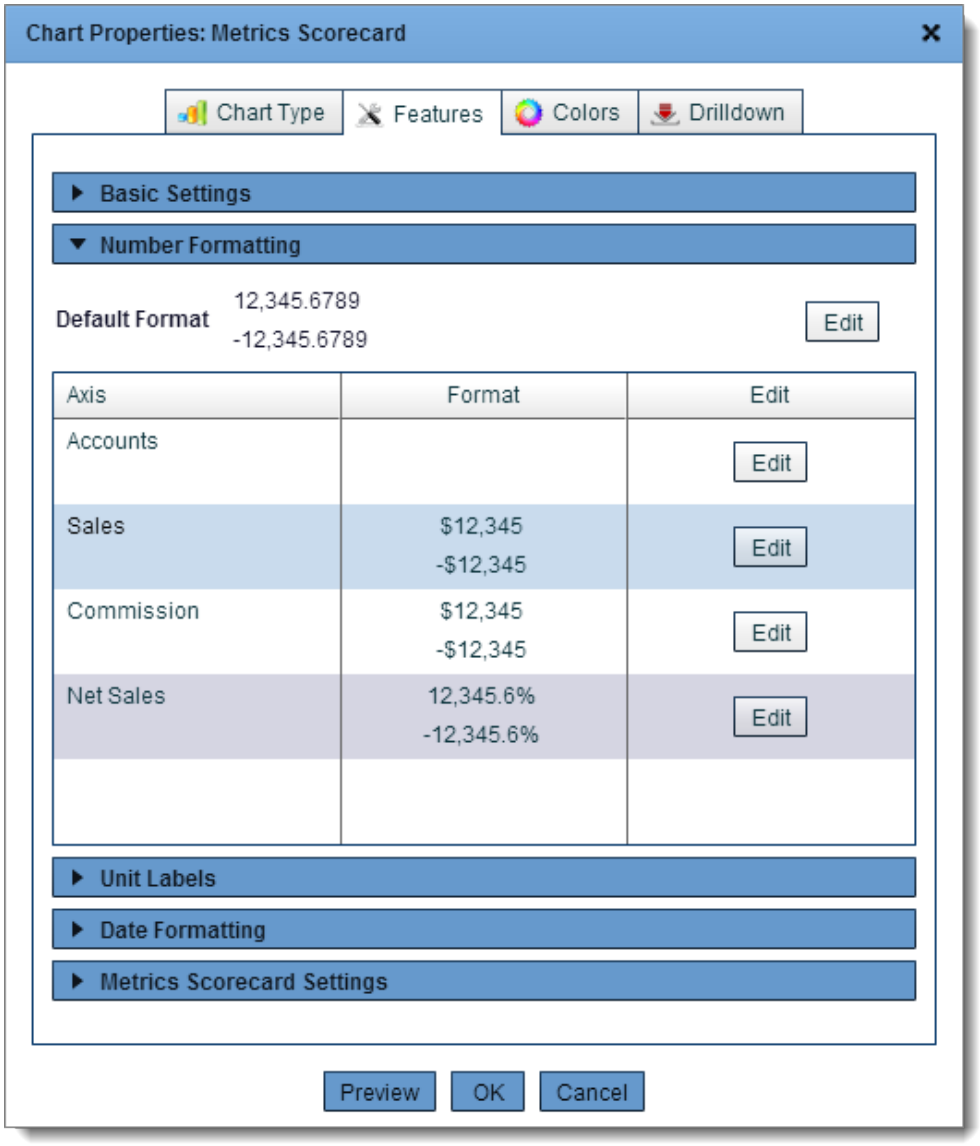


Figure 10-23

You can modify the 'Default Format' to simultaneously change all axis number formats or you can change each one individually. Clicking on any "Edit" button will open a **Number Format** window. This window will be titled either "Chart Default" or titled specific with the axis you are working with (see Figure 10-24)

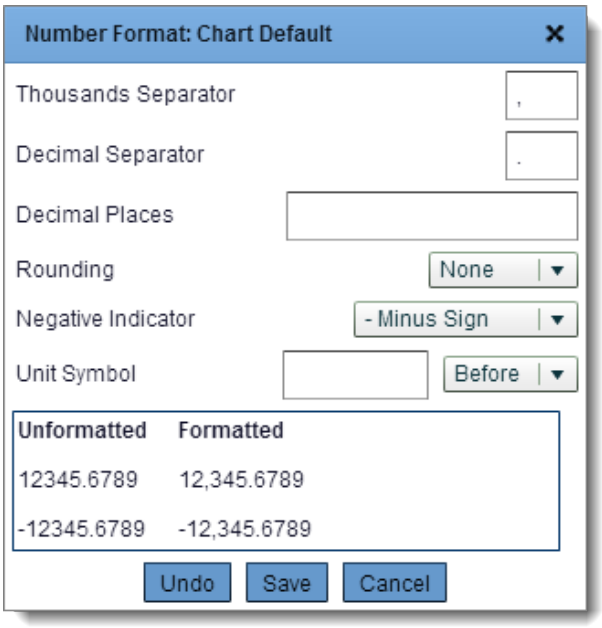


Figure 10-24

You have the option of configuring the "Thousands Separator" and "Decimal Separator" fields or leaving the fields blank to discard the separator. You can set the "Decimal Places" and have the option of rounding either up or down or not rounding at all. Charts can be configured to display the "Negative Indicator" as either '-' or '()'. Adding a symbol to the "Unit Symbol" field will display the symbol in the chart's mouse over pop-up bubble and, depending on the chart type, in the chart data. Figure 10-25 shows a Metrics Scorecard chart with Unit Symbols for each of the three axes (two dollar signs and a percentage sign). Notice the two dollar columns also have "US" and "CAN" included in the prefix, just before the dollar sign.

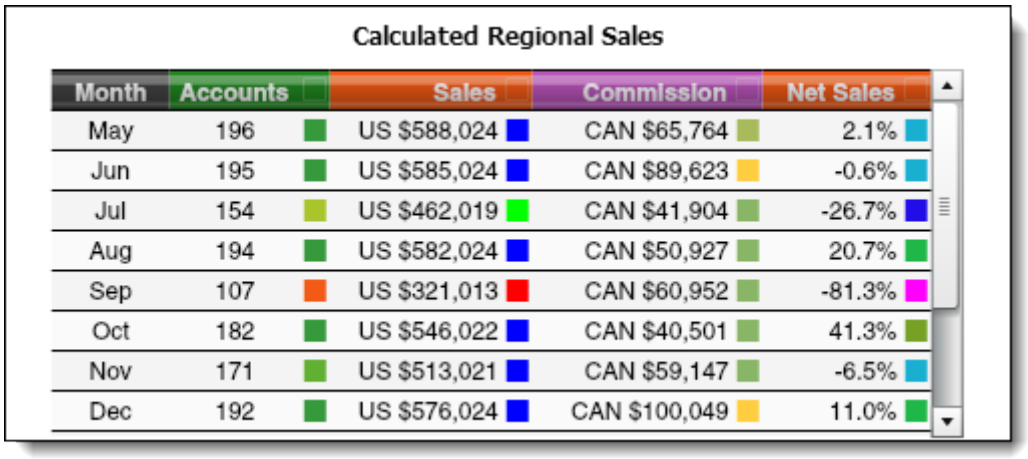


Figure 10-25

10.3 Unit Labels

Unit Labels are available for all charts regardless of the chart type. These settings allow you to add additional text to a chart's legend. Leaving the Unit Labels blank will force the legend to only show its Y-axis labels.

Adding text to the Unit Labels will append that text to the end of its Y-axis labels (see Figure 10-26 and Figure 10-27).

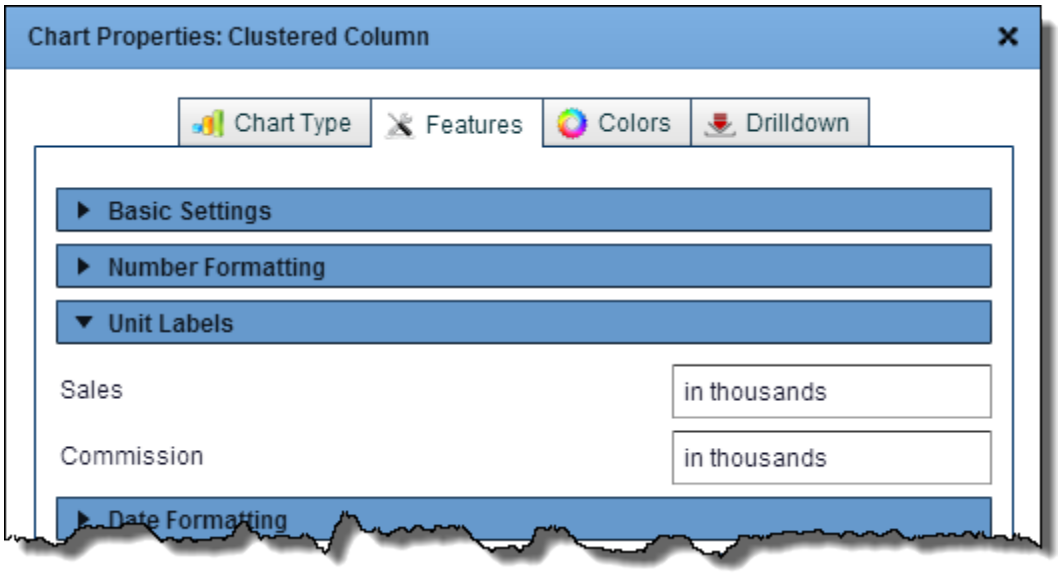


Figure 10-26

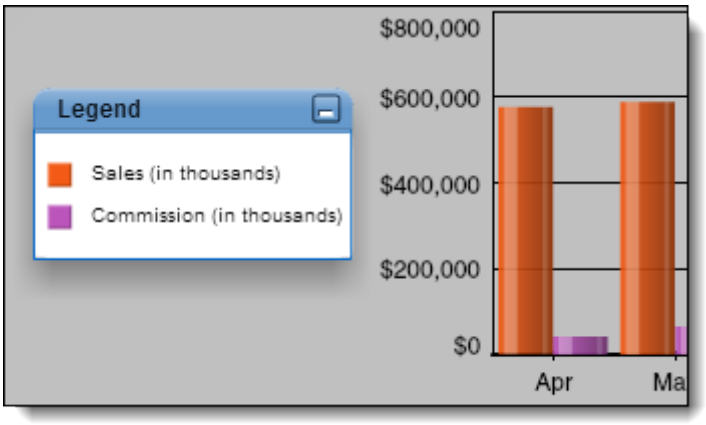


Figure 10-27

10.4 Date Formatting

There are a variety of ways to display the value of a date. Date Formatting settings are available for charts that have an axis with the "Datetime" data type. These settings help you customize how a chart displays dates.

The following are the possible format patterns and their translations:

Format	Display	Description
yyyy	2010	Year, 4 digits
yy	10	Year, 2 digits
M	2	Month, 1 or 2 digits
MM	02	Month, 2 digits
MMM	Feb	Month, 3-Letter abbreviation
MMMM	February	Month, full name spelled out
d	6	Day in month, 1 or 2 digits
dd	06	Day in month, 2 digits
E	Wed	Day of Week, 3-letter abbreviation
EEEE	Wednesday	Day of week, full name spelled out
H	15	Hour in day, (0-23), 1 or 2 digits
HH	15	Hour in day, (0-23), 2 digits
h	3	Hour in am/pm, (1-12), 1 or 2 digits
hh	03	Hour in am/pm, (1-12), 2 digits
m	7	Minute in hour, 1 or 2 digits
mm	07	Minute in hour, 2 digits
a	PM	AM or PM marker
s	9	Second in minute, 1 or 2 digits
ss	09	Second in minute, 2 digits
S	230	Milliseconds

Table 12

Note: *When you open the* ***Chart Data*** *window of a chart, all date data will be displayed in the default system date format. When viewed on the chart, the date format will reflect what is specified in 'Chart Properties | Features | Date Formatting'.*

The "Default Date Format" will be used for all axes unless a specific axis has a format defined. This default format is 'M/d/yy' and will display the date in numeric form only (see Figure 10-28).

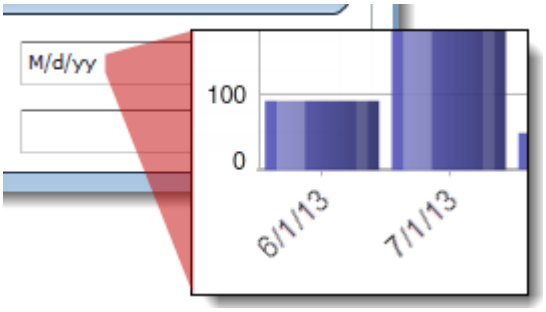


Figure 10-28

Users can select the arrow button that appears next to the date formatting text box to view the list. Selecting a format from the list will populate the text box with pre-defined date formats (see Figure 10-29).

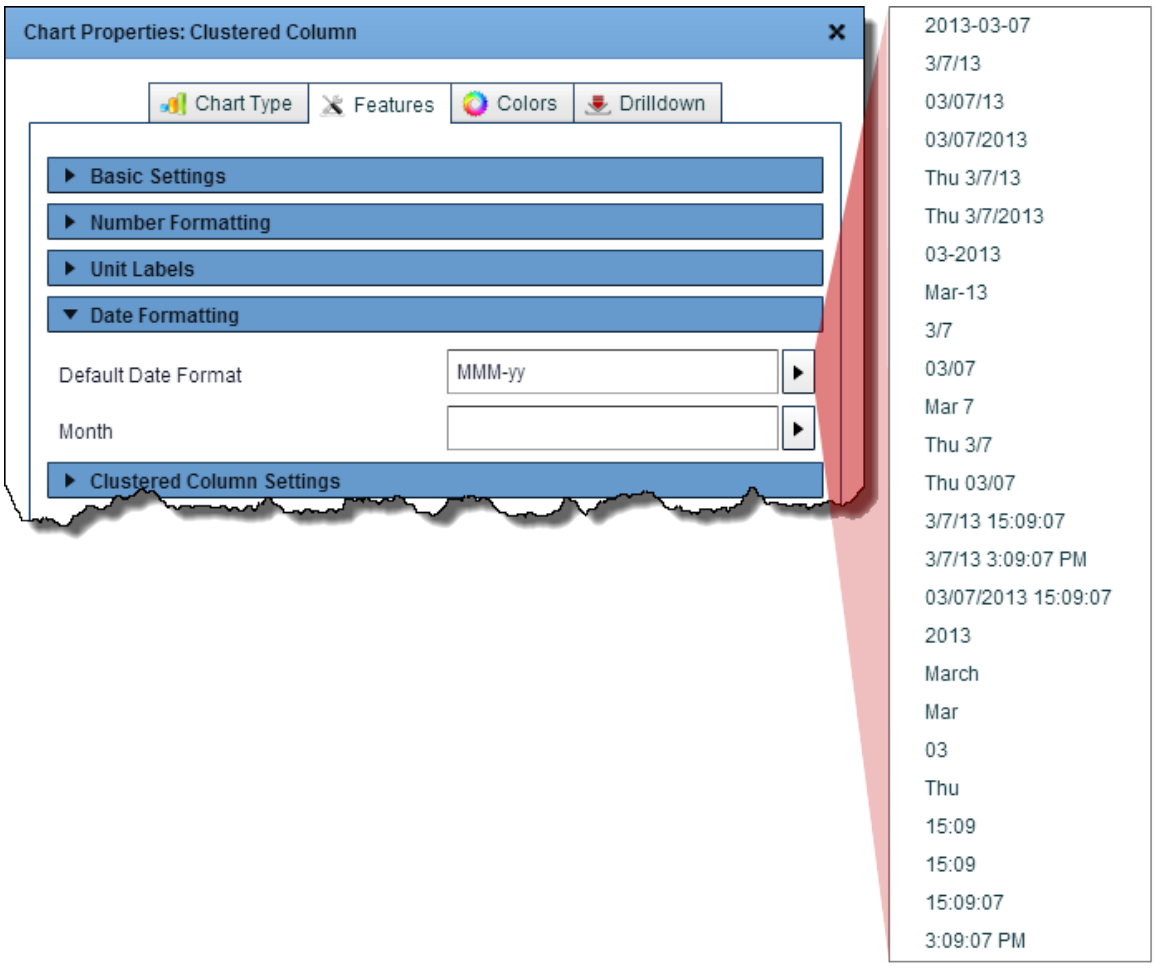


Figure 10-29

If the date format for the "Default Date Format" is changed to '`MMM dd, yyyy`', then all axes date values will be displayed in the format "`Oct 01, 2013`" (see Figure 10-30). If no format is defined for any axis (including the default format) the system date format will be used.

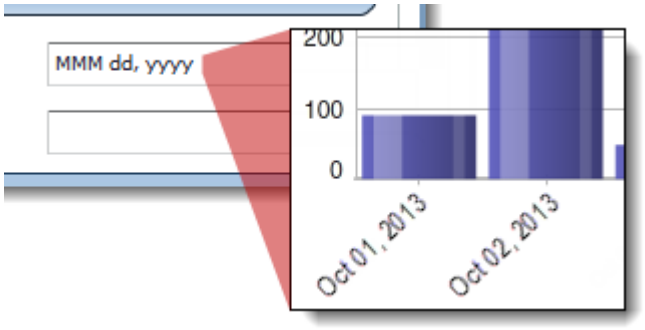


Figure 10-30

10.5 "Chart Specific" Settings

Every chart type in iDashboards has a collection of settings that are unique to that chat type. This group of settings is displayed in the '"Chart Specific" settings section of the **Chart Properties** window where "Chart Specific" is replaced with the chart type when viewed in the application. All of these settings are either self-explanatory or can be understood with a little experimentation. For this reason, and because the various '"Chart Specific" settings sections can contain 100's of settings when taking into account all of the chart types, these settings are not documented in this manual.

10.5.1 Expanding/Collapsing Property Groups

Some chart properties are grouped within the same area within the "Chart Specific" settings. Some properties are distinct enough to have an expanding/collapsing button for ease of use. Users may need to expand a property grouping to see all settings.

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11. Chart Properties: Colors

To access the Chart Colors options, right-click on a chart and select the 'Chart Properties…' option from the right-click menu. Then, from the Chart Properties window, select the 'Colors' tab. Alternatively, click 'Chart Properties > Colors…' from the Chart Menu button of the desired frame. This window controls the basic color components of the selected chart. Based on the selected chart type, the icons on the left may vary (see Figure 11-1).

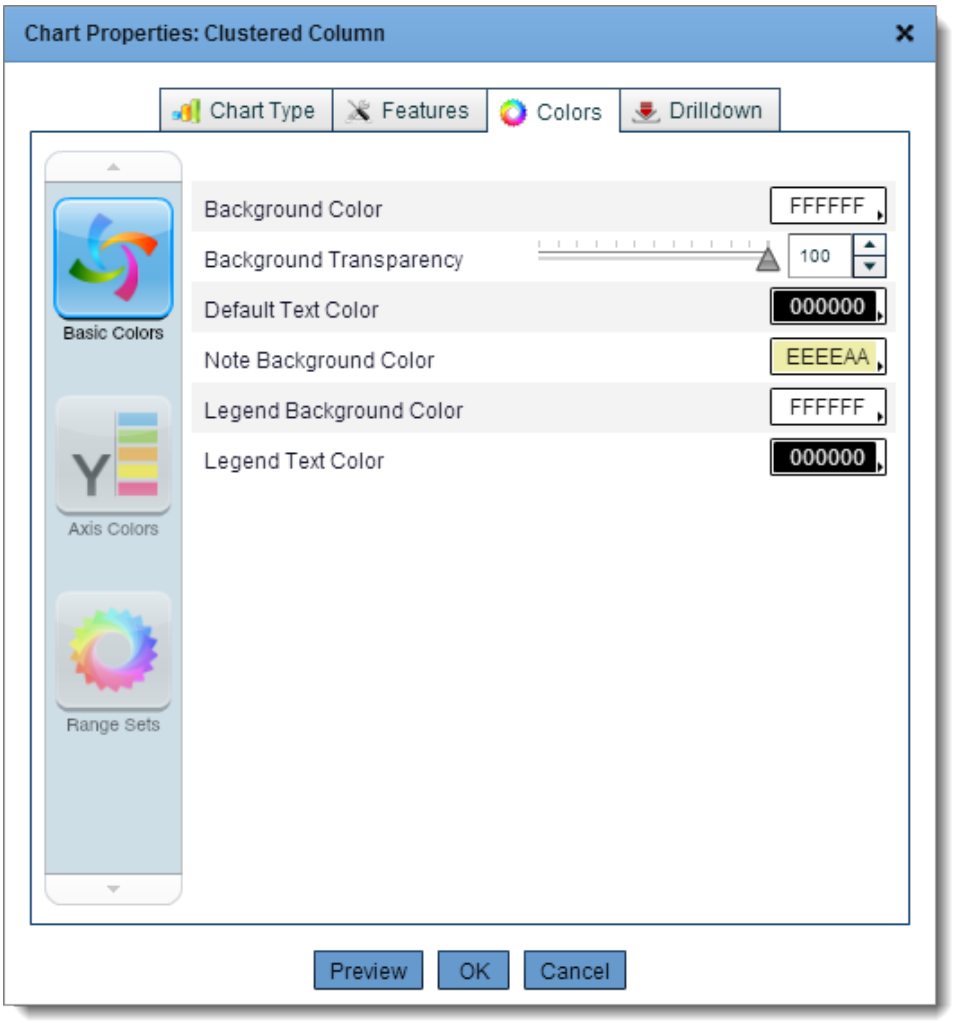

Figure 11-1

11.1 Basic Colors

The 'Basic Colors' icon provides the option to change the color of a select number of features. These features are available in all charts regardless of their type. The features are as follows:

Feature	Description	Default
Background Color	The chart's background.	White (FFFFFF)
Background Transparency	The chart's background transparency level. Often used when an image is used as a dashboard background. (0 = no transparency & 100 = full transparency)	Value = 100
Default Text Color	The chart's title and any text color that is not explicitly configurable.	Black (000000)
Note Background Color	An optional display of information.	Tan (EEEEAA)
Legend Background Color	The background for an optional display of axis values or descriptions.	White (FFFFFF)
Legend Text Color	The text for an optional display of axis values or descriptions.	Black (000000)

Table 13

11.2 Axis Colors

The 'Axis Colors' icon provides the option to associate a color with each Y axis on the chart. These features are available in those charts that display data for each Y variable (examples include bar, column and line charts) (see Figure 11-2).

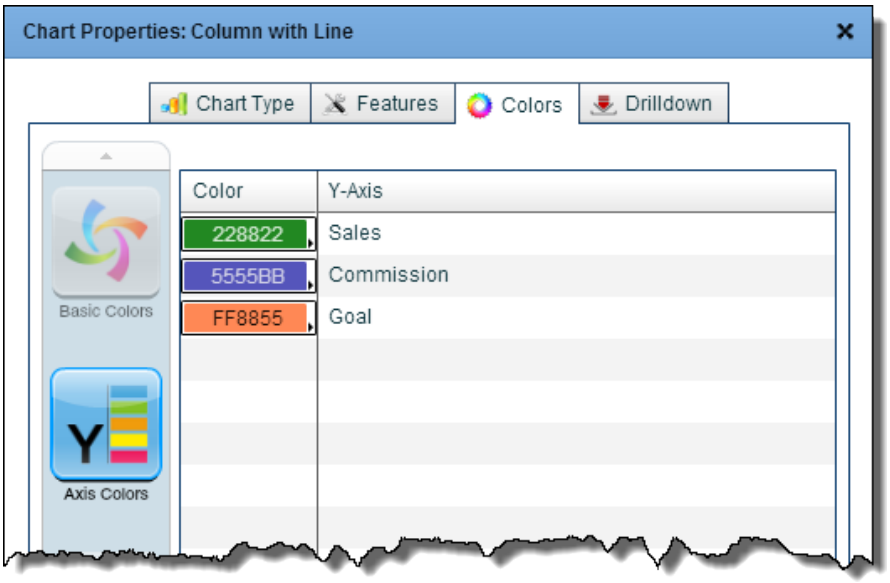

Figure 11-2

11.2.1 Chart Axis Colors using Shared Color Palette

Within 'Chart Properties > Colors > Axis Colors', a user can customize the axis colors one-at-a-time. However, shared palette colors can be automatically applied to the chart axis colors. While on the screen that allows axis colors to be changed, select the drop down

menu called 'Apply palette to chart axes…' (see Figure 11-3). Notice how the palette colors are previewed in a thin ribbon below the name of the palette.

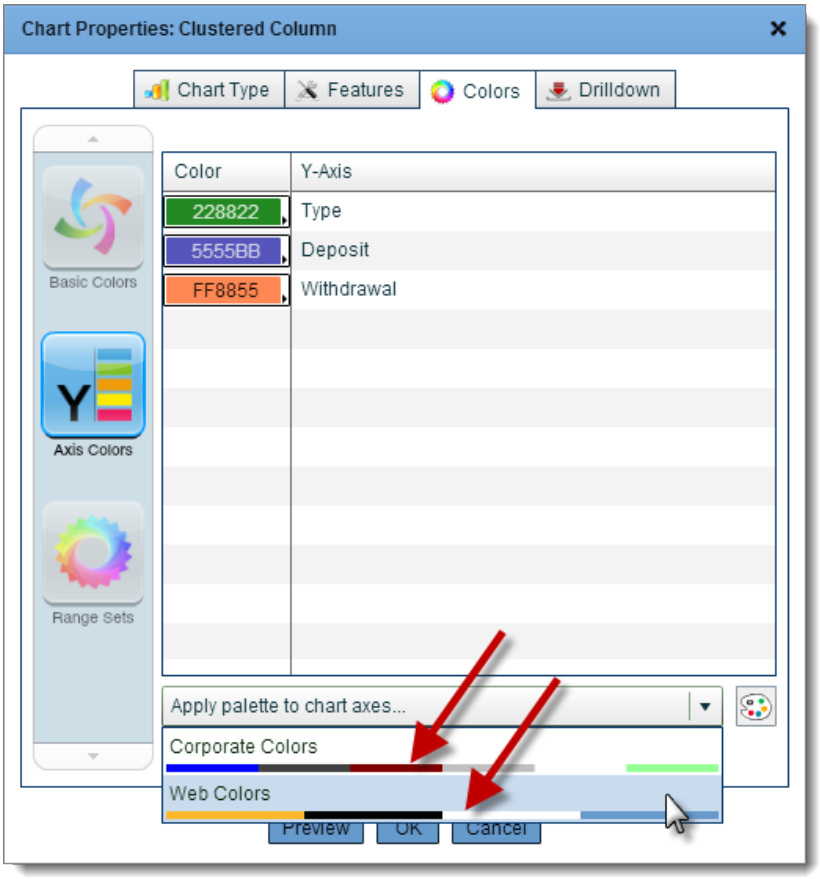

Figure 11-3

Once the palette is selected, the user will need to click the button to apply the palette colors as the axis colors.

***Note**: Colors are applied in the exact order as their appearance in the shared palette. The first color of the selected palette will be applied to the first axis, the second color will be applied to the second axis, etc.*

"Web Colors" begins with Orange, Black, White, and then Blue. When applied to the chart with 3-axes, Orange, Black and White were used (see Figure 11-4).

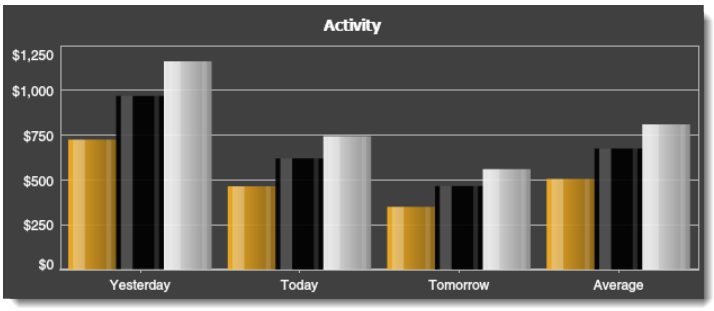

Figure 11-4

11.3 Range Sets

The ‘Range Sets’ icon provides the option to change the color ranges that are displayed on a chart (see Figure 11-5). These features are available in certain charts only (speedometer charts, metric charts, map charts, etc.). This feature allows you to configure a chart so that various portions of the chart will change color based on the value(s) the chart is pulling from its data source. You are able to configure the range values, colors and labels. Ranges can be placed on all of the axes, on the axis individually or a combination of the two.

Default ranges are automatically assigned by evaluating the highest value the chart returns and dividing it in to equal parts from zero to that value. The number and color of divisions is customizable.

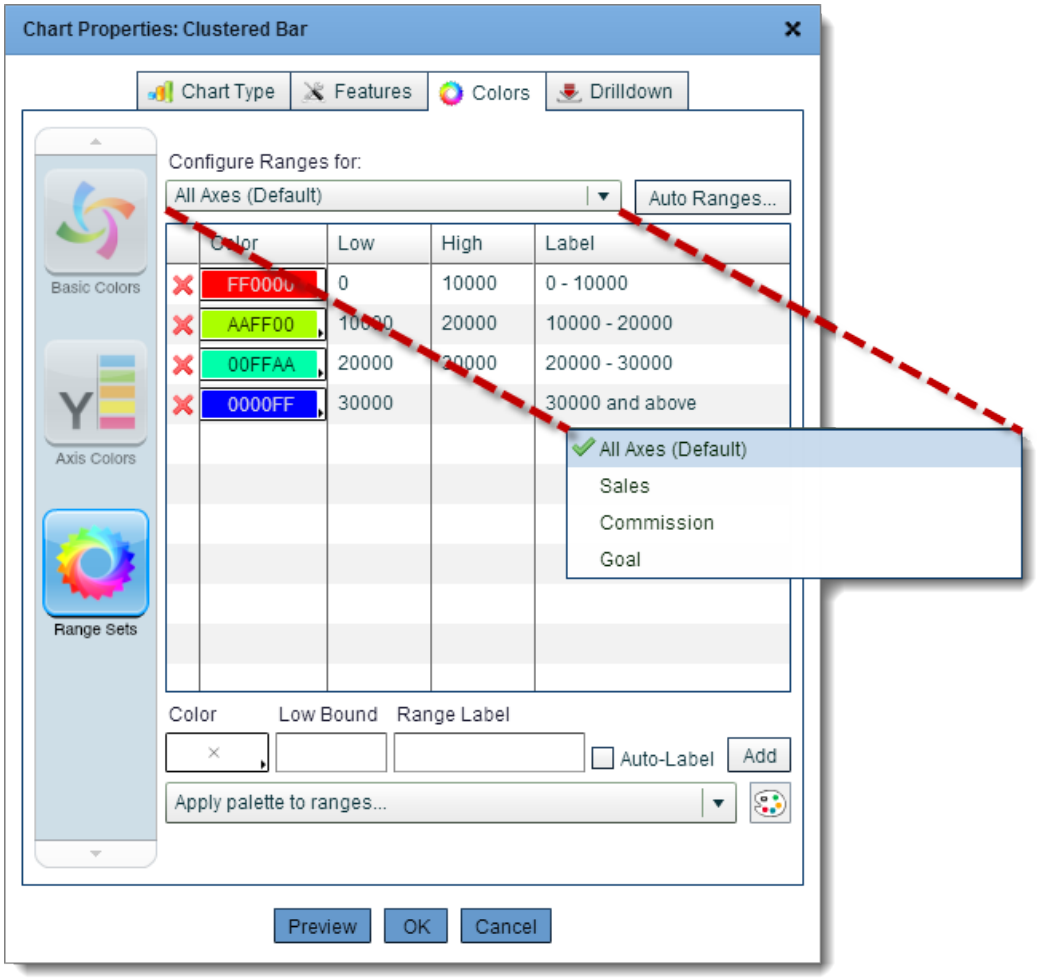

Figure 11-5

Change the color of the range by clicking on the colored box in the "Color" column. This will launch the color palette window.

If you want to delete a range, click the red 'X' next to the color. The "Low" and "High" range will automatically adjust to pick the low value from the following range and apply it to the high value from the previous range. The labels will automatically change if the "Auto-Label" box is selected.

Add ranges by selecting the Range Color and its lower bound, then clicking the "Add" button. You can manually add the Range Label or choose 'Auto-Label' to have iDashboards choose the label for you. Range Labels will show up in the chart legend. You cannot have a range with the same lower bound or you will get an error.

If the 'Auto-Label' checkbox option is chosen and you try to change the label, a message box will pop up informing you that the label will be ignored.

Selecting the "Auto Ranges…" button will open an **Auto-Generate Ranges** window (see Figure 11-6). These settings allow you to set a low and high boundary, the range size and

the beginning and ending colors of the ranges. For the color range you can choose a progression type. Each “Progression Type” will automatically assign colors to each of the ranges based on the ‘Begin Color’ and ‘End Color’.

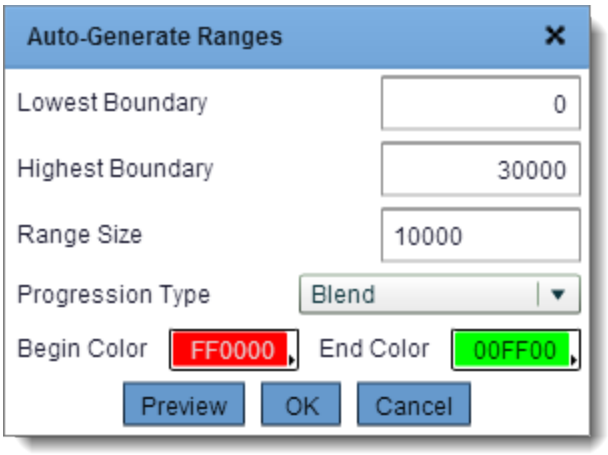

Figure 11-6

There are three types of progressions: Spectrum, Reverse-Spectrum and Blend.

Using the Auto-Generate Ranges settings, the “Spectrum” Progression Type from Figure 11-6, and custom colors, the ranges will display as shown in Figure 11-7. For Reverse-Spectrum and Blend range sets see Figure 11-8 and Figure 11-9 respectively.

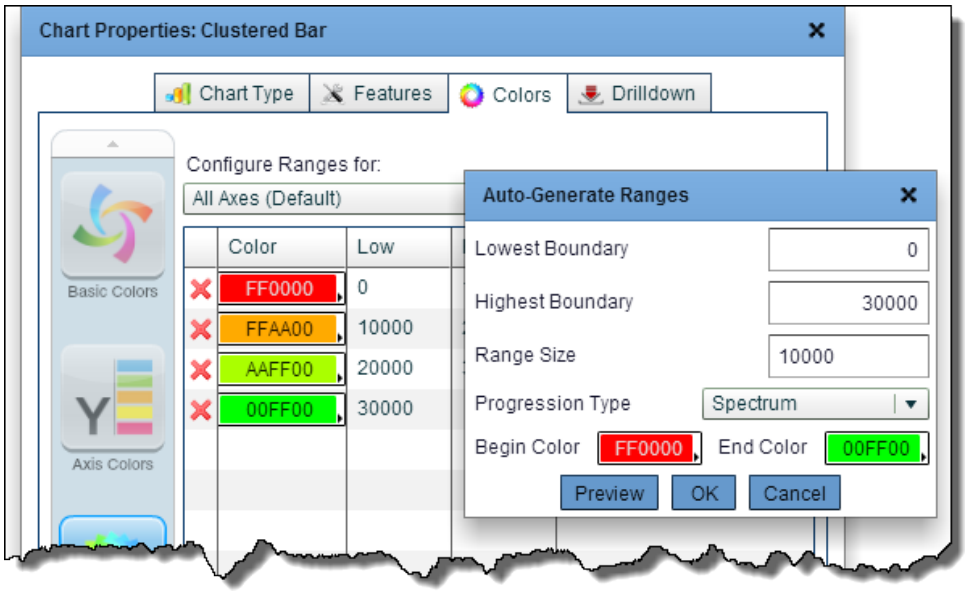

Figure 11-7

Figure 11-8

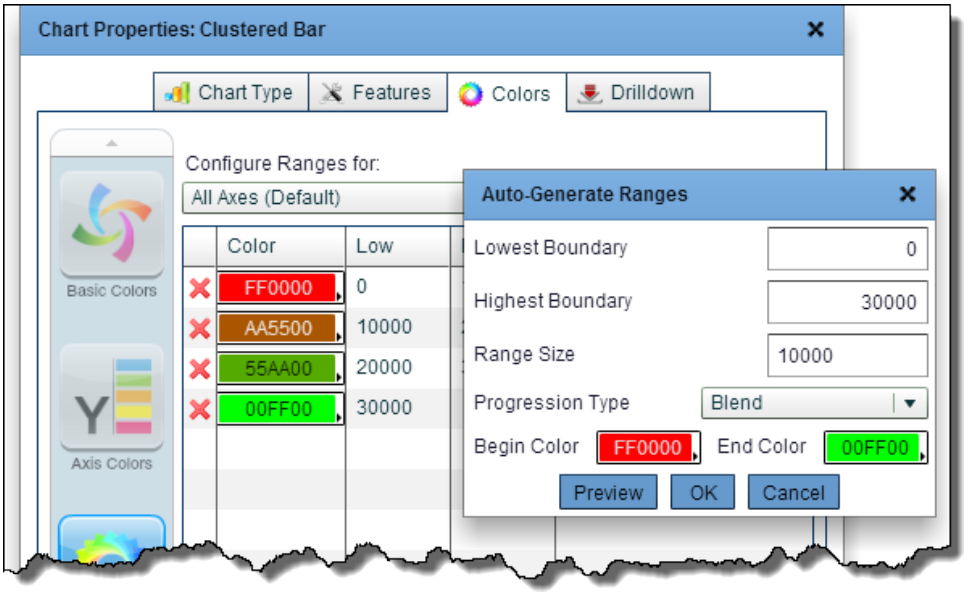

Figure 11-9

11.3.1 Chart Range Colors using Shared Color Palette

Some charts have the ability to use Range Colors to represent different numeric values. Within 'Chart Properties > Colors > Range Sets', a user can customize the range colors one-at-a-time. However, shared palette colors can be automatically applied to the chart range colors. While on the screen that allows range colors to be changed, select the drop down menu called 'Apply palette to ranges…' (see Figure 11-10). Notice how the palette colors are previewed in a thin ribbon below the name of the palette.

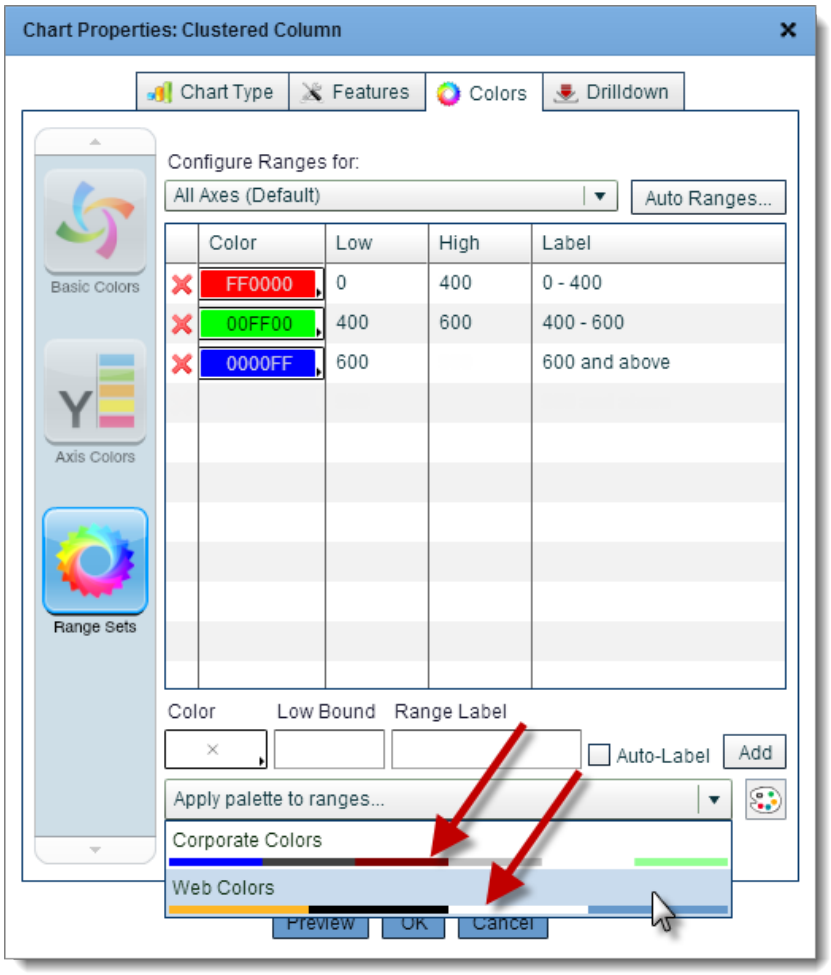

Figure 11-10

Once the palette is selected, the user will need to click the button to apply the palette colors as the range colors.

***Note**: Colors are applied in the exact order as their appearance in the shared palette. The first color of the selected palette will be applied to the first range, the second color will be applied to the second range, etc.*

"Web Colors" begins with Orange, Black, White, and then Blue. When applied to the chart with 3-ranges, Orange, Black and White were used (see Figure 11-11).

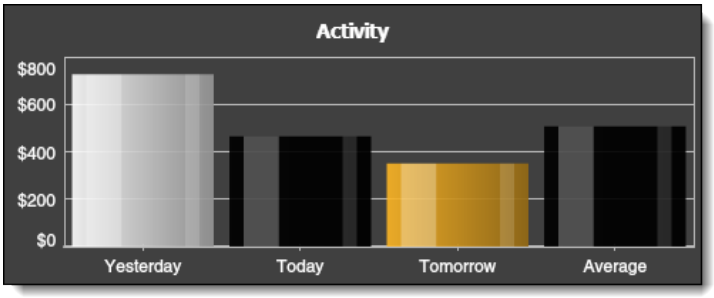

Figure 11-11

11.4 X Value Colors

The 'X Value Colors' icon provides the option to associate a color with each X-axis value on the chart. This feature is available in all of the pie charts and the bubble chart.

Selecting the radio button "Use Default Colors" will automatically assign colors when the chart is loaded. Selecting the radio button "Select Custom Colors" will provide a table that can be populated with assigned colors for each unique X value (see Figure 11-12).

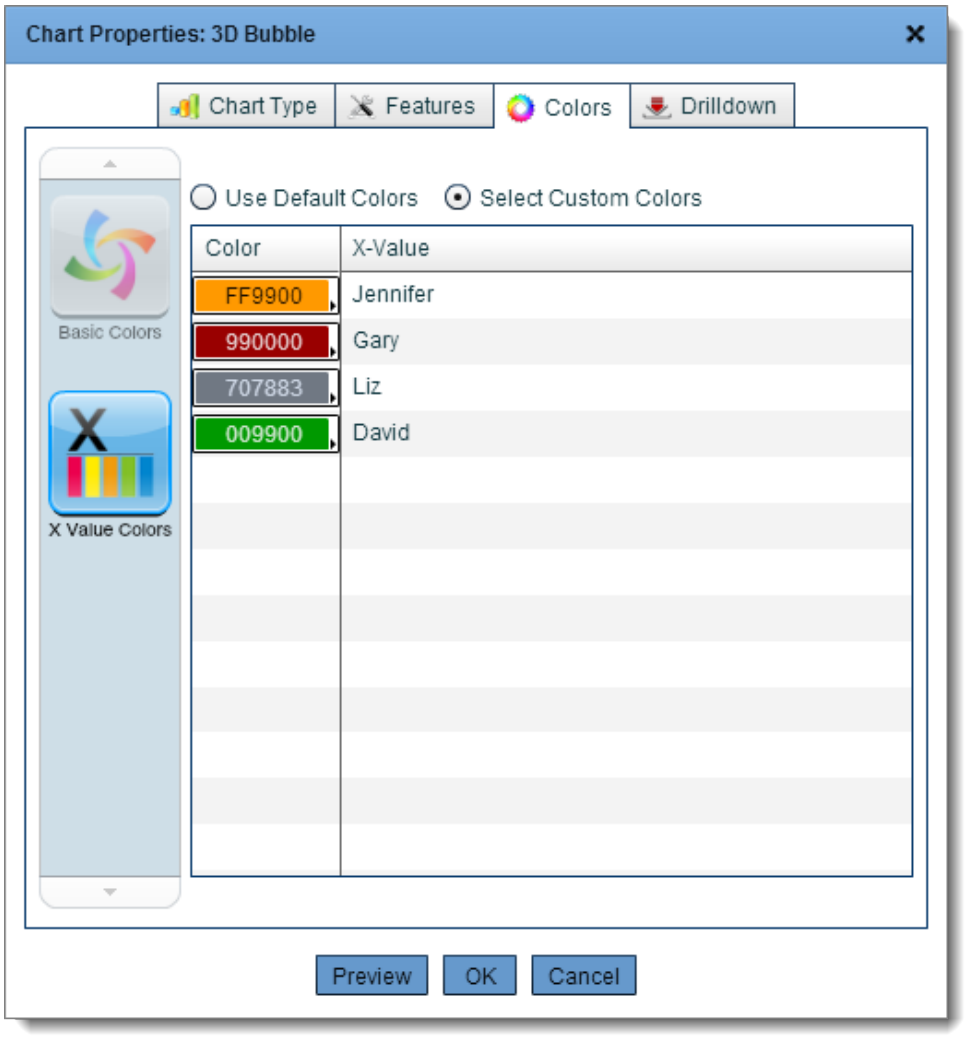

Figure 11-12

By unique X value, the X value “Gary” from Figure 11-12 will only appear in the table once, and can only be assigned one color, even though it may appear multiple times in a dataset. The benefit is that it will always have the same color across different pivot selections.

This is also the case for system-assigned colors. On bubble charts, there is one bubble per non-unique X value, and the color of each bubble is its corresponding X value color. On a pie chart in sum down mode, the X value colors are used for pie slices, each of which represents a non-unique X value. Note that there can be two distinct slices for “Gary” on the same pie, and both will have the same color.

The colors selected by the user from the “Select Custom Colors” option will be persisted and used for those X values the next time the chart is loaded. If the dataset contains new X values on the next chart load, for which there are no saved colors, they’ll be given system assigned colors that will be saved as user-selected colors the next time the chart is saved.

The X value colors will display in the legend along with the date or number formatted X values.

Note: *The system may duplicate colors already in use by other X values. Users should utilize System-assigned colors whenever the set of X values is likely to change. (As is the case with Date-based X values.)*

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12. Chart Properties: Drilldowns

Note: *The functionality described in this chapter is available only to the Analyst or Administrator roles.*

The drilldown functionality of iDashboards allows a user to click on a chart and have that click-action (1) display a different ***chart***, (2) display a different ***dashboard***, (3) display a ***web page*** or (4) change other chart's **pivots**. When the user clicks on the chart (called the "source chart"), the value they clicked on will be passed as a parameter during the drilldown so that the "target chart, dashboard or web page" can filter on it. The value being passed can be the value from the X-axis, Y-axis or combination of both values from the metric that was clicked on. Also, any pivot values that exist and are selected in the source chart will be passed as parameters to the target (see Chapter 16, "Advanced Chart Features" for information on pivots). This combination of drilling down and passing parameters is typically implemented when you would like to see more detailed information about the data point you clicked on displayed in the target chart, dashboard or web page. If you have been granted the Analyst or Admin role, you will be able to create these drilldown paths. If you are a regular user, you will be able to simply navigate through drilldown paths already created within dashboards.

A hierarchy of multiple levels of drilldown may be created. For example, the top-level chart may have top level metrics, which may drill down to secondary level metrics, which may drill down to item level metrics, which may drill down to SKU level metrics. During each drilldown, the metric you clicked will be passed to the next chart to be filtered.

To access the Chart Drilldown options, right-click on a chart and select the 'Chart Properties…' option from the right-click menu. Then, from the Chart Properties window, select the 'Drilldown' tab. Alternatively, click 'Chart Properties > Drilldown…' from the Chart Menu button of the desired frame (see Figure 12-1).

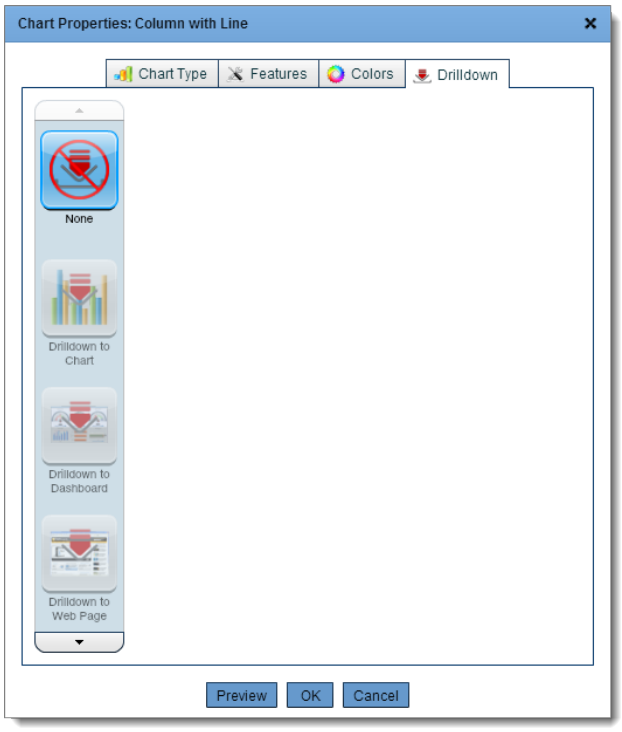


Figure 12-1

Note: *As you place your cursor over a chart and see the cursor icon as hand shaped, it is indicative of the chart having a drilldown (see Figure 12-2).*

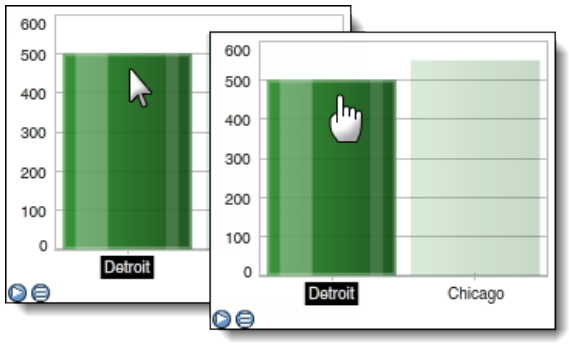


Figure 12-2

12.1 Drilldown to Chart

To drill down to a chart, open the **Chart Properties** window and click the “Drilldown” tab. Select the “Drilldown to Chart” icon.

The next step is to select the target chart. Click on the “Select…” button to open the **Select Chart** window which will show all Categories you have access to. In this window, select the Category and the specific Chart you want linked as the target chart.

When the source chart is clicked, the drilldown can have the target chart display in the same dashboard frame as the source chart or in a different frame within the dashboard. To select which frame to have the target chart displayed in, select the desired frame "tag name" in the "Target Dashboard Frame" dropdown box (see Figure 12-3). See Chapter 5, "Designing Dashboards" for information on frame tag naming. To save this drilldown link, save the chart.

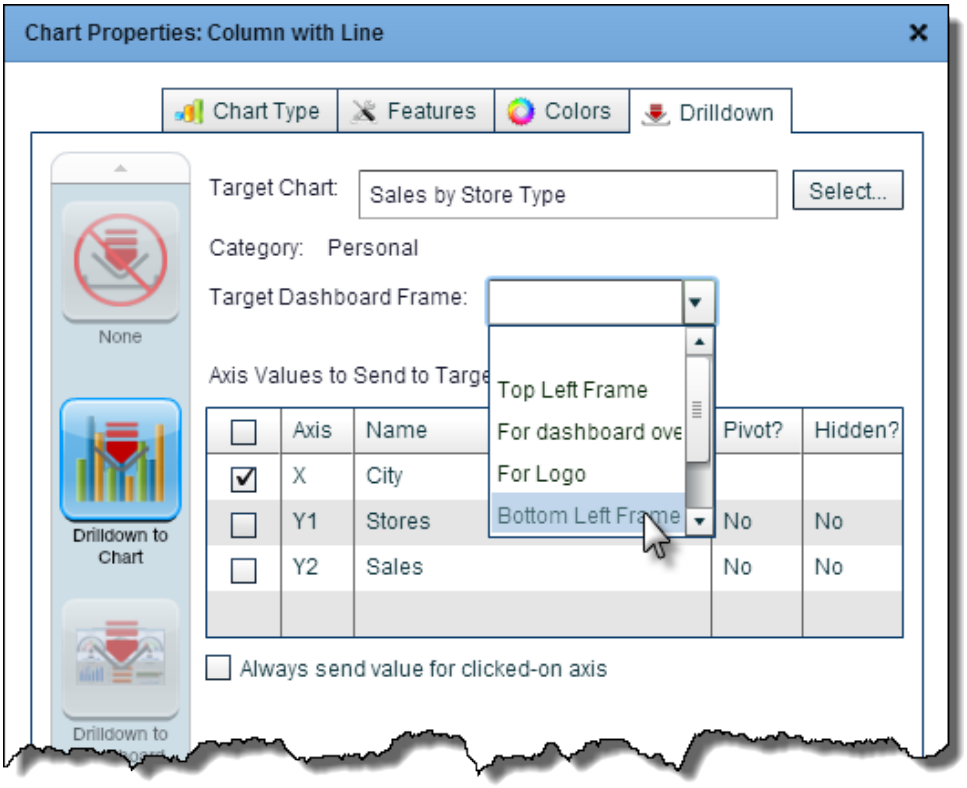


Figure 12-3

12.1.1 Selecting the Axis Value for Target Chart Filtering

iDashboards will allow users to select any of a chart's axes to be used for drilldown filtering; this includes hidden axes. The default options will suggest using the X-axis and all pivoted Y-axes used for drilldown filtering, however, any combination of axis selections can be used including the option to choose none of the axes for drilldown filtering.

If the target chart does not contain the filtered value that was selected from the source chart, then the target chart is presented to the user without any data filtering.

12.1.2 Always send value for clicked-on axis

When drilling down to a chart, in addition to being able to select the axes to be used for drilldown filtering, a designer can also check a box labeled "Always send value for clicked-on axis." When this is checked, the clicked-on axis will be used for drilldown filtering, in addition to any axes which are specifically selected for drilldown filtering. In some cases, the clicked-on axis might be the only one used for filtering.

12.1.2.1 X-Axis Value Example

A common use for using drilldowns is to pass along a value from the X-axis that will help filter the data in the target chart. Figure 12-4 and Figure 12-5 show examples of a source chart and target chart respectively. When a user clicks on “Chicago” in the source chart, the target chart will be displayed and will automatically filter its data on “Chicago”.

Note: *The “Drill Back” button on the target chart allows the user to drill back up the drilldown path.*

Figure 12-4

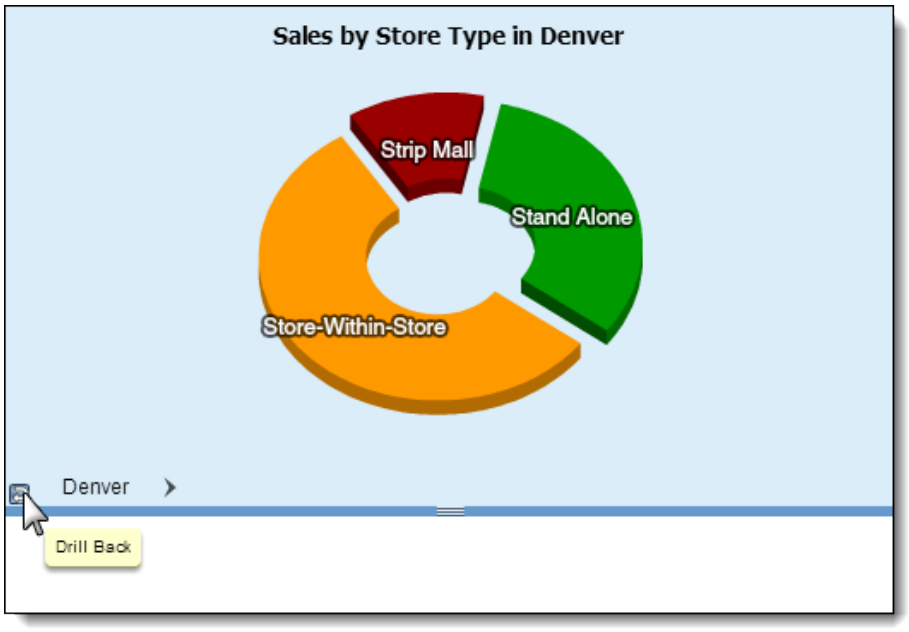


Figure 12-5

12.1.2.2 Y-Axis Value Example

Another common use for using drilldowns is to pass along a value from the Y-axis that will help filter the data in the target chart. Figure 12-6 and Figure 12-7 show examples of a source chart and target chart respectively. When a user clicks on the row that contains a Y-axis value of "Bill Jones" in the source chart, the target chart will be displayed and will automatically filter its data on "Bill Jones" to show just his sales figures.

Note: *The "Drill Back" button on the target chart allows the user to drill back up the drilldown path.*

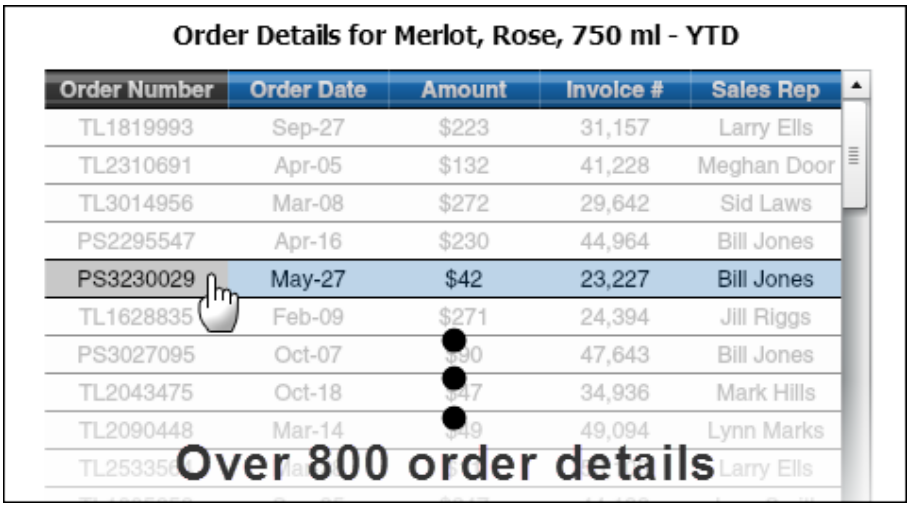

Order Details for Merlot, Rose, 750 ml - YTD
Order Number
Order Date
Amount
Invoice #
Sales Rep
TL1819993 Sep-27 $223 31,157 Larry Ells
TL2310691 Apr-05 $132 41,228 Meghan Door
TL3014956 Mar-08 $272 29,642 Sid Laws
PS2295547 Apr-16 $230 44,964 Bill Jones
PS3230029 May-27 $42 23,227 Bill Jones
TL1628835 Feb-09 $271 24,394 Jill Riggs
PS3027095 Oct-07 47,643 Bill Jones
TL2043475 Oct-18 34,936 Mark Hills
TL2090448 Mar-14 49,094 Lynn Marks
Over 800 order details

Figure 12-6

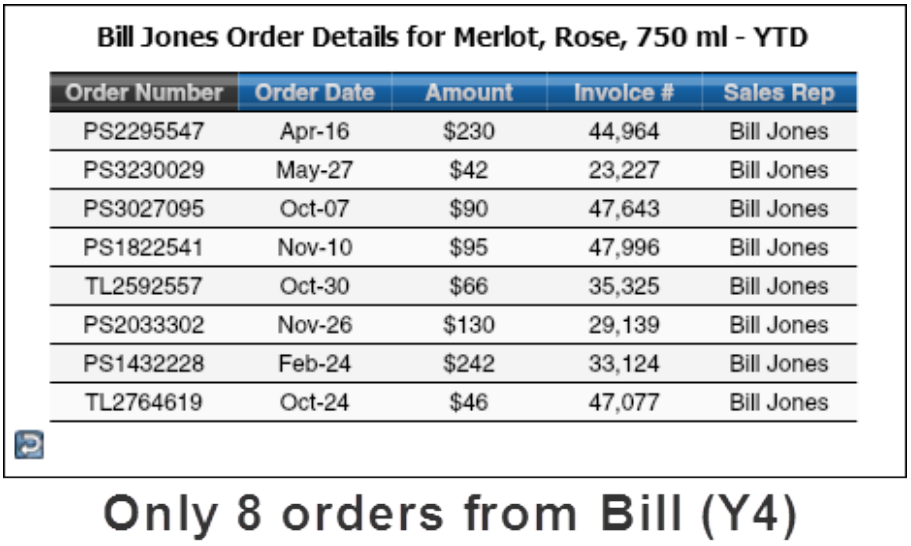

Bill Jones Order Details for Merlot, Rose, 750 ml - YTD
Order Number
Order Date
Amount
Invoice #
Sales Rep
PS2295547 Apr-16 $230 44,964 Bill Jones
PS3230029 May-27 $42 23,227 Bill Jones
PS3027095 Oct-07 $90 47,643 Bill Jones
PS1822541 Nov-10 $95 47,996 Bill Jones
TL2592557 Oct-30 $66 35,325 Bill Jones
PS2033302 Nov-26 $130 29,139 Bill Jones
PS1432228 Feb-24 $242 33,124 Bill Jones
TL2764619 Oct-24 $46 47,077 Bill Jones
Only 8 orders from Bill (Y4)

Figure 12-7

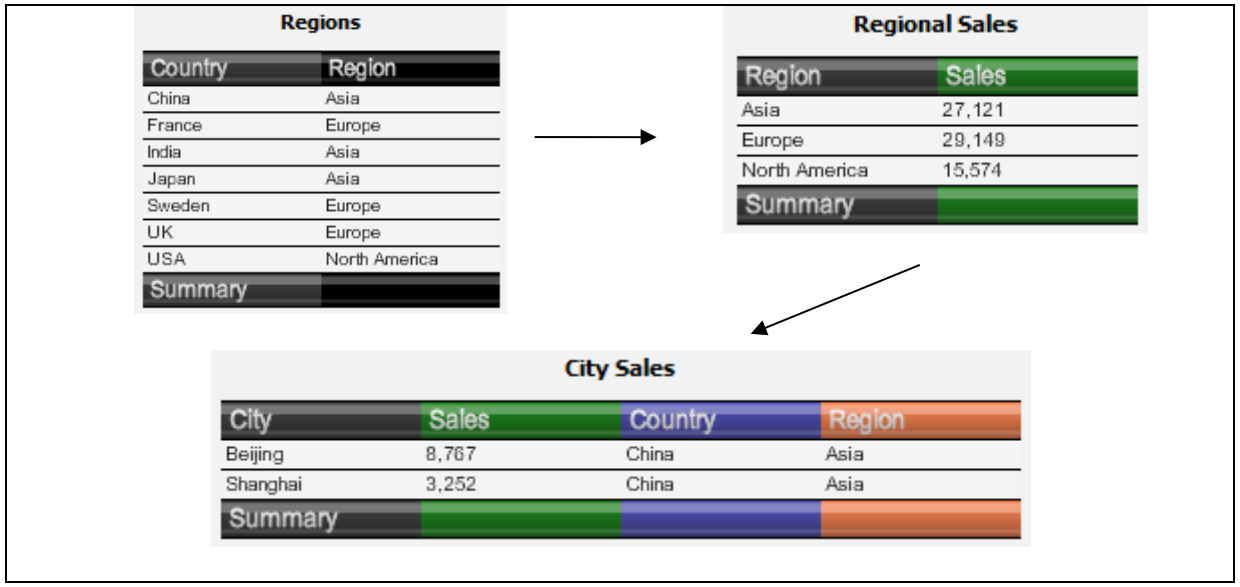
12.2 Drilldown Parameters

IDashboards offer a technique for passing values from a Source chart into a Target chart/dashboard. When clicking on a chart to perform a drilldown, certain information is passed to the drilldown target. This information includes the axis label and clicked-on axis value for the axes that were selected to be sent down during drilldown. If the drilldown target is a chart, the chart can use the axes values passed to it to auto-select its pivots or to populate a macro in the chart title. If the drilldown target is a URL, the axes label/value pairs can be included in the URL so that the destination web page can use them.

If you are performing drilldowns that cascade down through multiple charts, it is important to note that the information passed during each drilldown is stored and maintained throughout all the drilldowns. Every time a chart is clicked on to perform a drilldown, the selected axes label/value pairs are stored so that they may be used by subsequent drilldown targets. Even if the drilldown target doesn't use one of the axes label/value pairs, they are still recognized and stored by the drilldown target. Therefore, when a new drilldown is performed, the new drilldown target can recognize and use the axes label/value pair that was previously ignored.

12.2.1 Conceptual Example

For example, assume the "Regions" chart has been configured to drill down into the "Regional Sales" chart. If you click on the row for China in the "Regions" chart, the X-axis label 'Country' and the X-axis value 'China' will be sent as drilldown parameters to the "Regional Sales" chart. The "Regional Sales" chart will accept and store this information, but it doesn't have any use for it in terms of displaying data. Now, let us assume the "Regional Sales" chart has been configured to drill down into the "City Sales" chart. If you click on the row for Asia in the "Regional Sales" chart, the X-axis label 'Region' and X-axis value 'Asia' will be sent as drilldown parameters to the "City Sales" chart, but so will the stored axis label 'Country' and value 'China' from the previous drilldown. The "City Sales" chart can use each of these label/value pairs when displaying data.



12.2.2 The Value Macro ${value:<Axis Name>}

`${value:<Axis Name>}` is a macro that will return the value of the axis named "<Axis Name>". The axis name is **case sensitive**. Often times, the dashboard builder will place the value macro into the title of the Target chart.

The example in Figure 12-4 illustrates the outcome of using the value macro. The Target chart, on the left, has an X-axis of "Country". The Source chart, on the right, has a pivot Y-Axis of "Country".

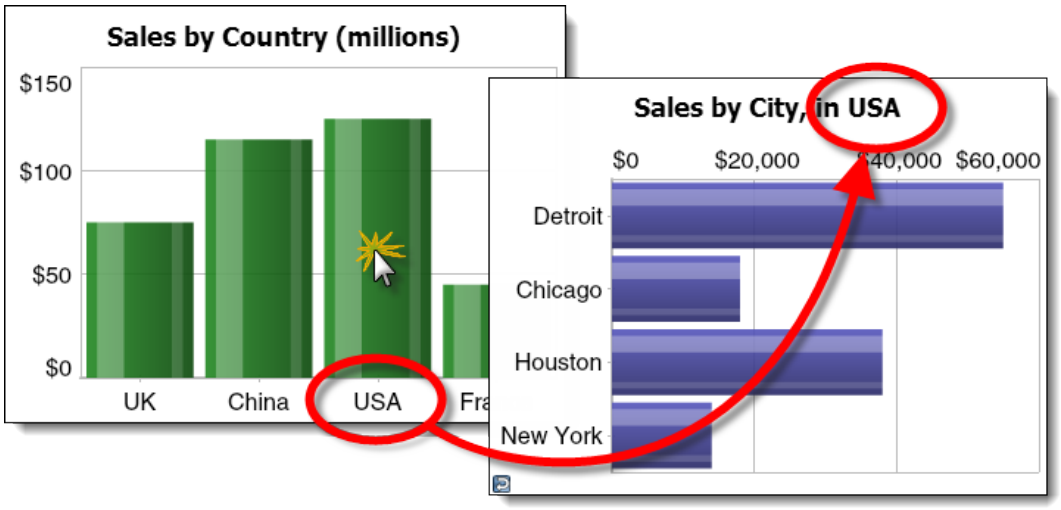


Figure 12-8

Using the value macro in the title of the Target chart would look like this:

```
Sales by City, in ${value:Country}
```

When the drilldown occurs in this example, iDashboards will use the value "USA" and place it into the title wherever the dashboard builder wanted the country name to appear. The value will only 'expand' when the chart is viewed after a drilldown, not during the chart building process.

12.2.3 Passing the Format of Dates or Numbers

iDashboards will always translate a simple date into a complex date (see Section 10.4, "Date Formatting") during the chart building process. During the drilldown process, the clicked-on date can be passed into the target chart. As the complex date value is passed, the source-chart date formatting will also be passed along. This is important when the dashboard builder chooses to use the date 'value macro' within the target chart.

Therefore, if the Source chart is formatting dates like this: "MMM-yy", then the value will be passed into the Target chart like this: "MMM-yy".

Number formatting will also pass down to the Target chart. Therefore, if the Source chart has number formatting like this: "$12,345.00", then the value will be passed into the Target chart like this: "$12,345.00".

12.3 Drilldown to Dashboard

To drill down to a dashboard, open the **Chart Properties** window and click the “Drilldown” tab. Select the “Drilldown to Dashboard” icon (see Figure 12-9).

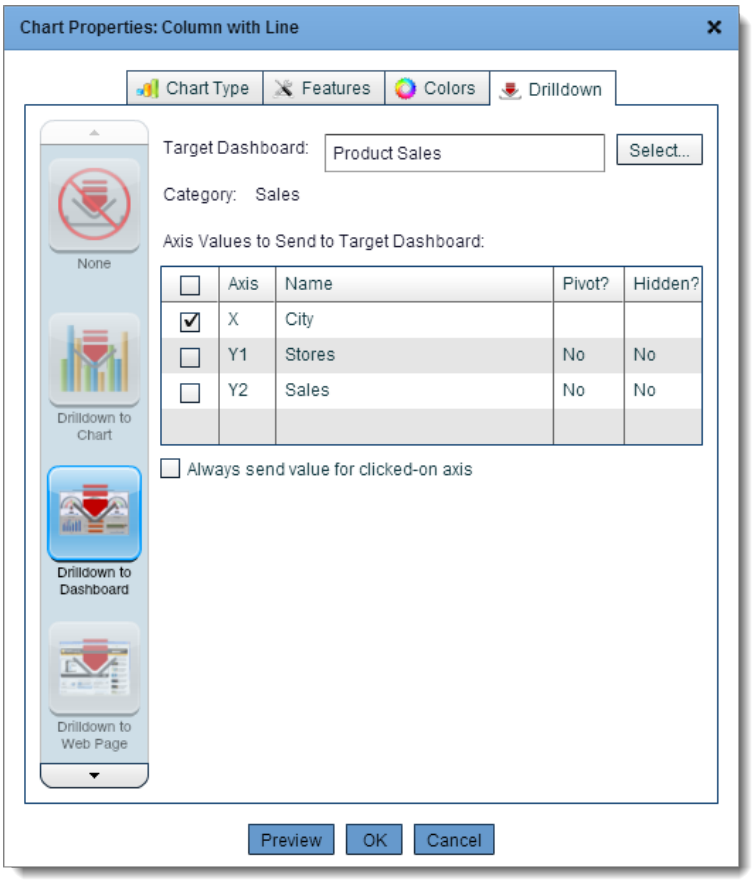


Figure 12-9

Click on the “Select…” button to open the **Select Dashboard** window that will show a list of all Categories you have access to. In this window, select the Category and highlight the specific Dashboard that you want to be linked as the target dashboard. When the source chart is clicked, the target dashboard will pop up and get displayed ***over*** the dashboard that contains the source chart you clicked on. To save this drilldown link, save the chart.

The recommended approach to creating effective drilldowns to dashboards is to have the target dashboard with charts having Pivots with Pivot labels identical to the X-label of the drill origination chart. iDashboards will automatically filter the Pivot columns in each chart of the target dashboard. This way, the entire target dashboard delivers filtered values within its contained charts. If a chart within the target dashboard does not a matching label as the drill origination chart, that chart will display in the dashboard with unfiltered data.

The ability to filter the target dashboard based on X or Y-axis values are available, just as it is with drilldowns to charts. The ‘Always send value for clicked-on axis’ option is as well.

12.4 Drilldown to Web Page

It can be very useful to create a drilldown link out to a web page. You may simply want the user to link out to a web page for information purposes, or, if you have development control of the target web page, you can have that target web page perform a filter based on the data point(s) the user clicks on in the source chart. A drilldown link to a web-based reporting tool is a good example.

To drill down to a web page, open the **Chart Properties** window and click the "Drilldown" tab. Select the "Drilldown to Web Page" icon (see Figure 12-10). In the 'URL' field, provide the complete web site address to which the chart should be linked. Clicking on the chart will launch the linked web site in another browser window. To save this drilldown link, save the chart.

Note: *If a user has Pop-up Blocker activated within their browser, then the linked web site won't be able to open on drilldown.*

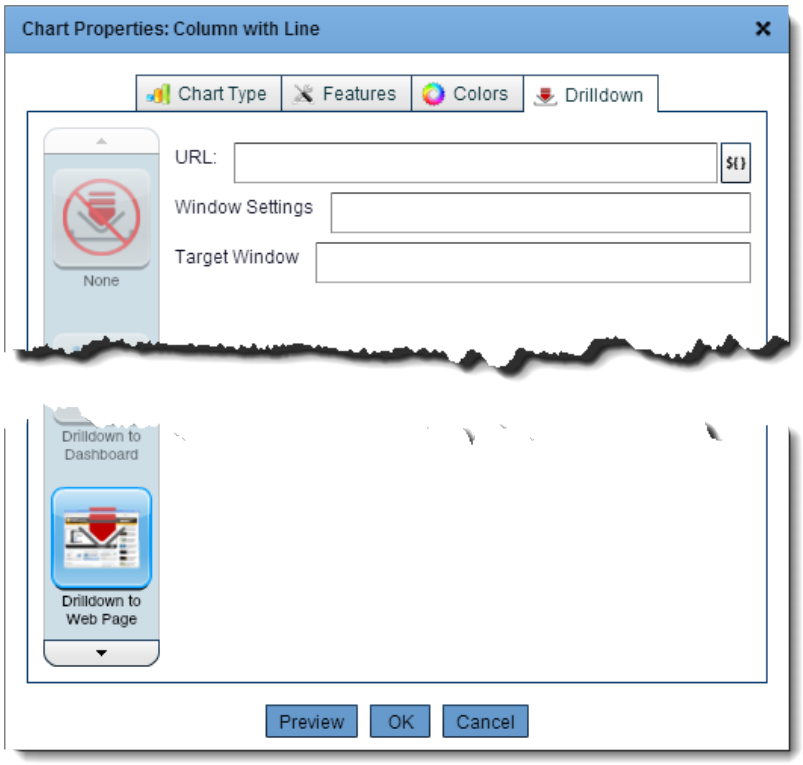


Figure 12-10

When setting up a URL as the destination for a chart drilldown, the drilldown can be configured to send iDashboards macros to the target URL. These macros should be added to the URL.

The following macros (see Table 14) can be used to configure a drilldown URL within the 'Drilldown' tab. Clicking on the macro button will display all available macros (see Figure 12-11). Here, all axes from the chart are displayed for easy selection. A value macro, like ${value:<Axis Name>}, can also be used with the URL string.

Flash Macro	Expands to:
`${user}`	Username value of user currently logged on
`${value:<Axis Name>}`	The value of the chosen <Axis Name>, which may be the X-axis or any Y-axis that is a pivot.
`${uevalue:<Axis Name>}`	(See Section 12.4.2, (when axis value is a URL)
`${chartid}`	chartID value
`${charttitle}`	chartTitle value
`${categoryid}`	categoryID value

Table 14

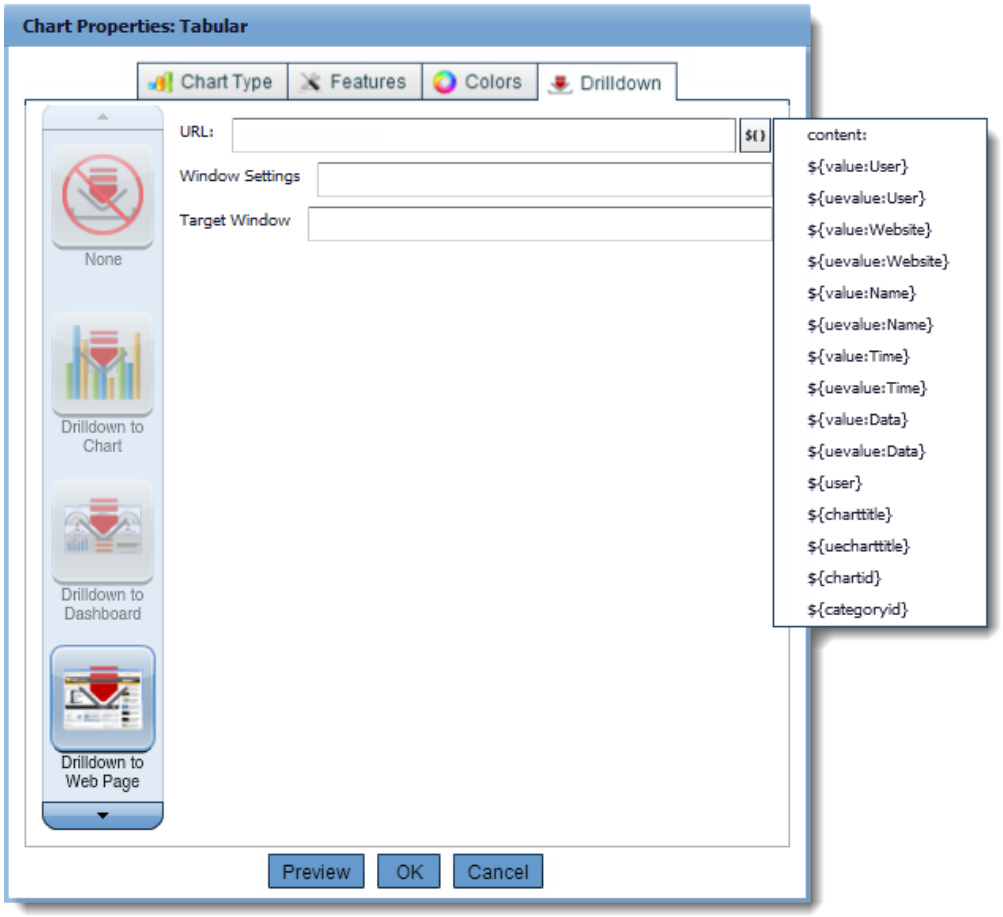


Figure 12-11

12.4.1 Passing the Value Macro (Non-URL)

For example, if the chart in Figure 12-12 has been configured to drill down into a web page and the 'URL:' field contains:

```
http://www.mywebpage.com/?plant=${value:Plant}&date=${value:Date}
```

Replace with actual URL

When the chart is clicked and the drilldown is initiated, the URL will be transformed into:

```
http://www.mywebpage.com/?plant=Chicago&date=July
```

Note the replacement of "`${value:Plant}`" with "Chicago" and "`${value:Date}`" with "July"

Note: *The values that get passed down can be any combination of X and Y axes within the chart. Any* spaces in the value will be replaced with '%20' and colons with '%3A'.

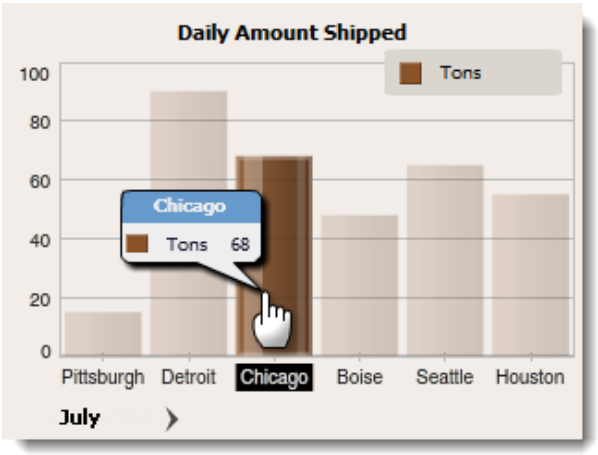


Figure 12-12

12.4.2 Passing the Value Macro (When Axis is URL)

If the drilldown axis contains a URL with a prefix of 'http://' or 'www', then the ${uevalue…} macro must be used. The 'ue' stands for 'unescaped', which will help circumvent browsers from substituting special characters when launching a new browser or browser tab. It is only necessary to use the 'ue' when the data column contains the URL.

For each `${value:<AxisName>}` macro, there is a corresponding `${uevalue:<AxisName>}` macro. For example, if the chart in Figure 12-13 has been configured to drill down into a web page and the 'URL:' field contains:

```
${uevalue:Website}
```

Figure 12-13

Because the unescaped value was used, the chart will drill down to a new web page without transforming special characters within the browser.

```
http://www.idashboards.com
```

12.4.3 Windows Settings & Target Window

There are several 'Window settings' and 'Link target window' options that can be set when launching the separate browser. These are any standard HTML modifiers that can be assigned to a new browser window. These modifiers take the form:

```
<settingname>=<setting value>
```

Modifiers are comma separated. Table 15 shows a list of modifiers available.

Modifier	Value	Description
width	number in pixels	Use this to define the width of the new window.
height	number in pixels	Use this to define the height of the new window.
resizable	yes or no	Use this to control whether or not you want the user to be able to resize the window.
scrollbars	yes or no	This lets you decide whether or not to have scrollbars on the window.
toolbar	yes or no	Whether or not the new window should have the browser navigation bar at the top (The back, forward, stop buttons etc.).
location	yes or no	Whether or not you wish to show the location box with the current URL (The place to type http://address).
directories	yes or no	Whether or not the window should show the extra buttons (personal buttons, etc...).
status	yes or no	Whether or not to show the window status bar at the bottom of the window.
menubar	yes or no	Whether or not to show the menus at the top of the window (File, Edit, etc...).
copyhistory	yes or no	Whether or not to copy the old browser window's history list to the new window.
screenX	number in pixels	Sets the position of the window in pixels from the left of the screen in Netscape 4+.

screenY	number in pixels	Sets the position of the window in pixels from the top of the screen in Netscape 4+.
left	number in pixels	Sets the position of the window in pixels from the left of the screen in IE 4+.
top	number in pixels	Sets the position of the window in pixels from the top of the screen in IE 4+.

Table 15

An example of a "Windows Settings" option is as follows:

```
width=1000,height=600,resizable=yes,left=0,top=0,status=yes,to
olbar=no,menubar=no
```

The 'Target Window' allows for an identification of the launched browser window so that the same browser window will be used every time a web page is linked. In order for this to work, enter a word or set of characters in the field. Every time the chart is clicked the URL will be launched in the same browser, not multiple browsers. Any word or set of characters can be used in the 'Target Window' field, however spaces are not allowed. If this field is left blank, each click on the same drilldown chart will launch a new browser displaying the target URL.

12.5 Changing Other Charts' Pivots

For this feature to function there must be other charts on the dashboard using pivots. For information on creating charts with pivots, see Section 16.1, "Using the Pivot Feature".

***Note**: Pivot charts do not filter data. Changing Pivots cannot alter the title of a chart.*

To change another chart's pivots, open the **Chart Properties** window and click the "Drilldown" tab. Select the "Change Other Chart's Pivots" icon (see Figure 12-14).

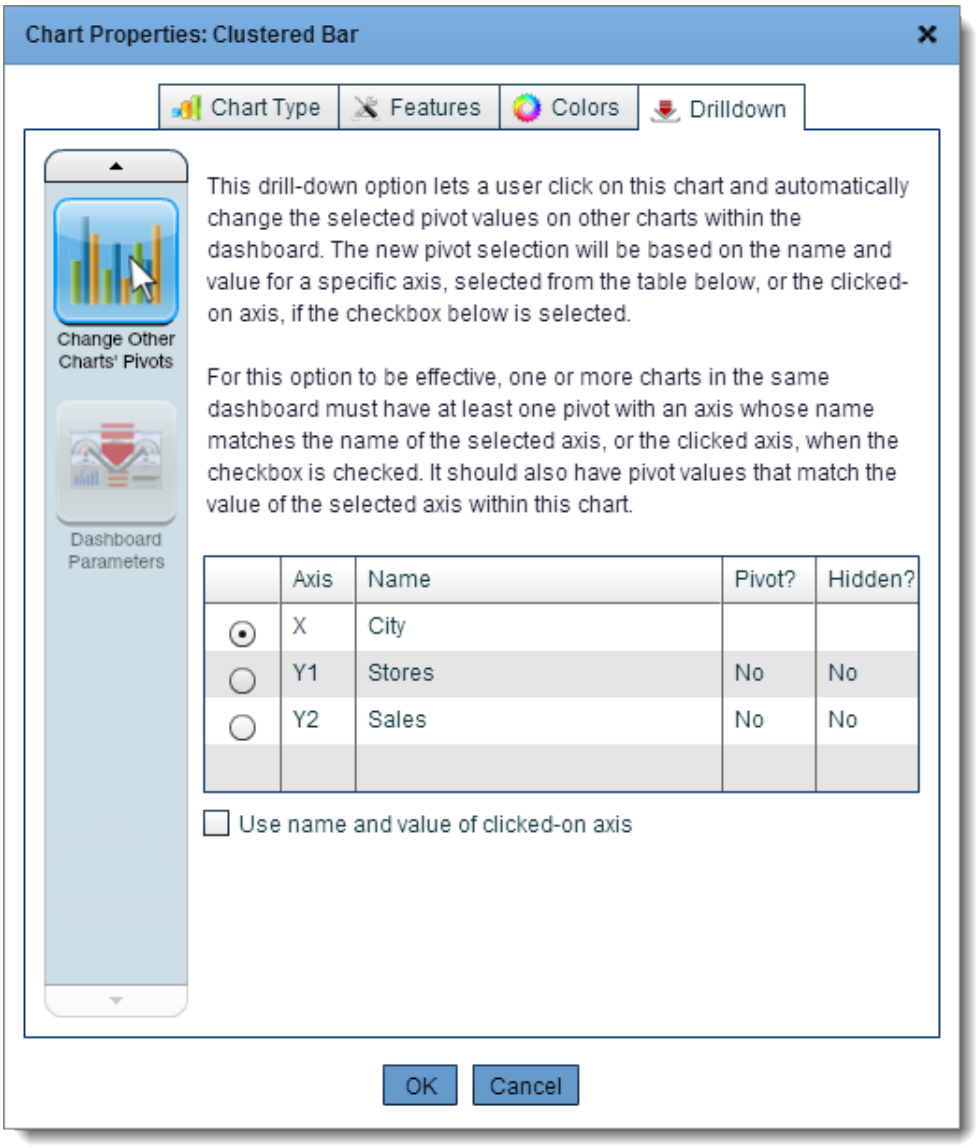


Chart Properties: Clustered Bar
Chart Type
Features
Colors
Drilldown
Change Other Charts' Pivots
Dashboard Parameters
This drill-down option lets a user click on this chart and automatically change the selected pivot values on other charts within the dashboard. The new pivot selection will be based on the name and value for a specific axis, selected from the table below, or the clicked-on axis, if the checkbox below is selected.
For this option to be effective, one or more charts in the same dashboard must have at least one pivot with an axis whose name matches the name of the selected axis, or the clicked axis, when the checkbox is checked. It should also have pivot values that match the value of the selected axis within this chart.
Axis
Name
Pivot?
Hidden?
X
City
Y1
Stores
No
No
Y2
Sales
No
No
Use name and value of clicked-on axis
OK
Cancel

Figure 12-14

This option will allow the user to click on a value in the source chart and have the pivots in adjacent charts, on that same dashboard, update to reflect the axis value that was clicked on. In Figure 12-15, when “Columbus” is clicked on in the source chart, the other two charts in the dashboard update to have “Columbus” selected in their pivots. See the description in Figure 12-14 for more detailed information on this feature.

Figure 12-15

12.5.1 Use name and value of clicked-on axis

If this option is checked, the clicked-on axis will be sent during the drilldown instead of the axis selected via the radio buttons.

12.6 Dashboard Parameters

For this feature to function there must be other charts on the dashboard using input parameters. There must also be a dashboard input parameter. For information on creating charts with input parameter, see Chapter 17, "Input Parameters".

***Note**: Input Parameter charts can filter data. Changing input parameter values can alter the title of a chart.*

This drill-down option lets a user click on this chart and automatically change the dashboard parameters that correspond to the selected axes names. In order for the dashboard parameter to be modified with a given axis value, the parameter display name must match

the axis name and the value must be an acceptable value for the parameter. Only the values of the selected axes, or the clicked-on axis if the checkbox below is selected, will be applied to the dashboard parameters.

12.6.1 Setup Example

- **Source Chart** – X Axis: State
- **Dashboard** – Input Parameter Name: theState | Label: State
- **Target Chart(s)** – Input Parameter Name: theState

In Figure 12-16 below, the source chart is on the left and two target charts are on the right; there is also a dashboard input parameter. When clicking on the source chart, the value "MI" is passed into the dashboard input parameter and then down into the input parameters within each target chart. Lastly, the two target charts are filtered, and the titles are updated (using the parameter macro).

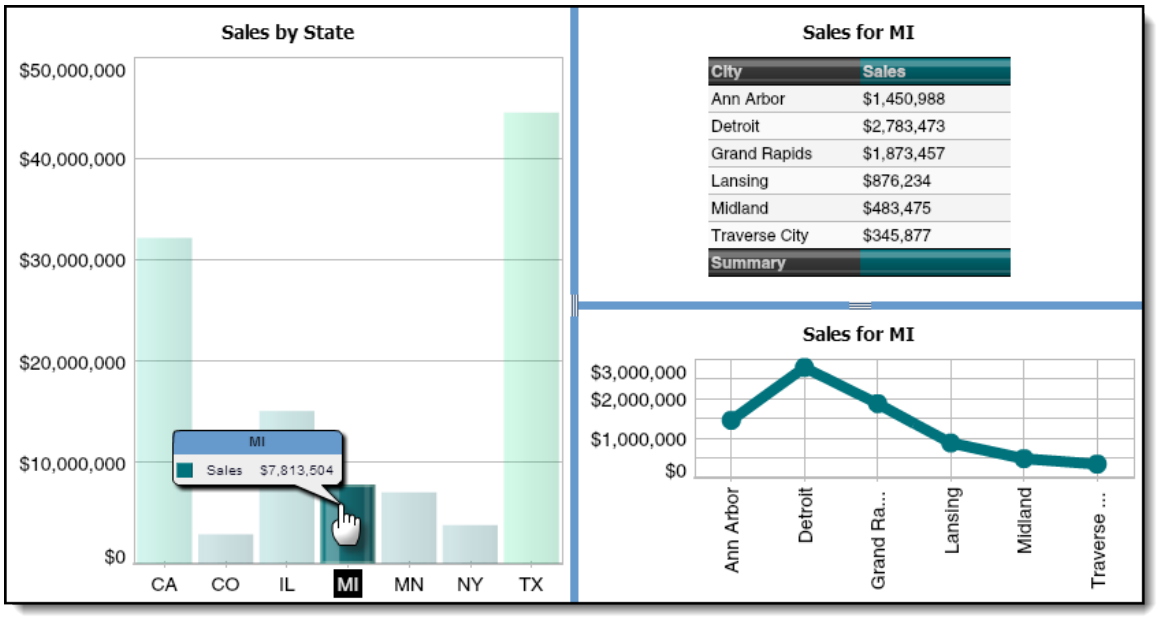


Figure 12-16

12.7 Removing Drilldown

To remove the drilldown, open the **Chart Properties** window and click the "Drilldown" tab. Select the "None" icon. Click the 'Save Chart' option to save the changes.

13. Colors

Editing colors is an essential function to customizing the final dashboard. IDashboards users may change the color of various items for text, backgrounds or for properties within charts. Options to change a color exist when a large or small color swatch (or 'button') is available (see Figure 13-1). Clicking on a color swatch will open a color picker (see Figure 13-2).

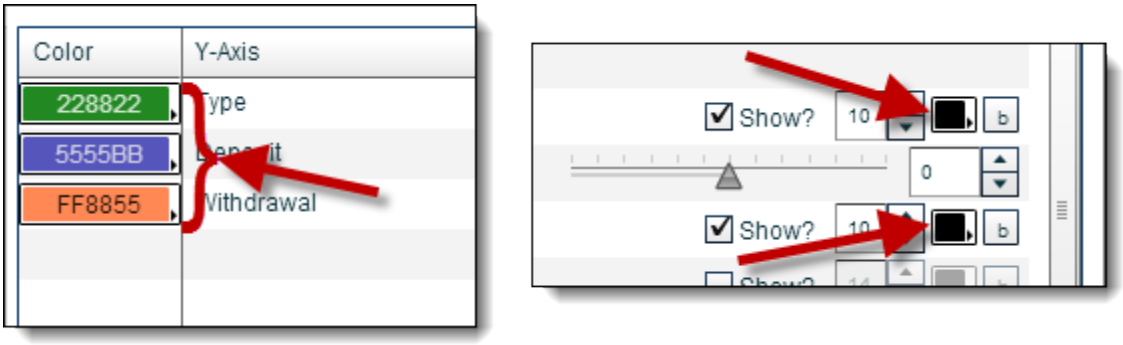


Figure 13-1

13.1 Color picker

iDashboards offers a variety of predefined colors. Click on a color to use the color. Figure 13-2 illustrates the various areas where colors can be selected. IDashboards offers predefined colors or the option to create a new, customized color.

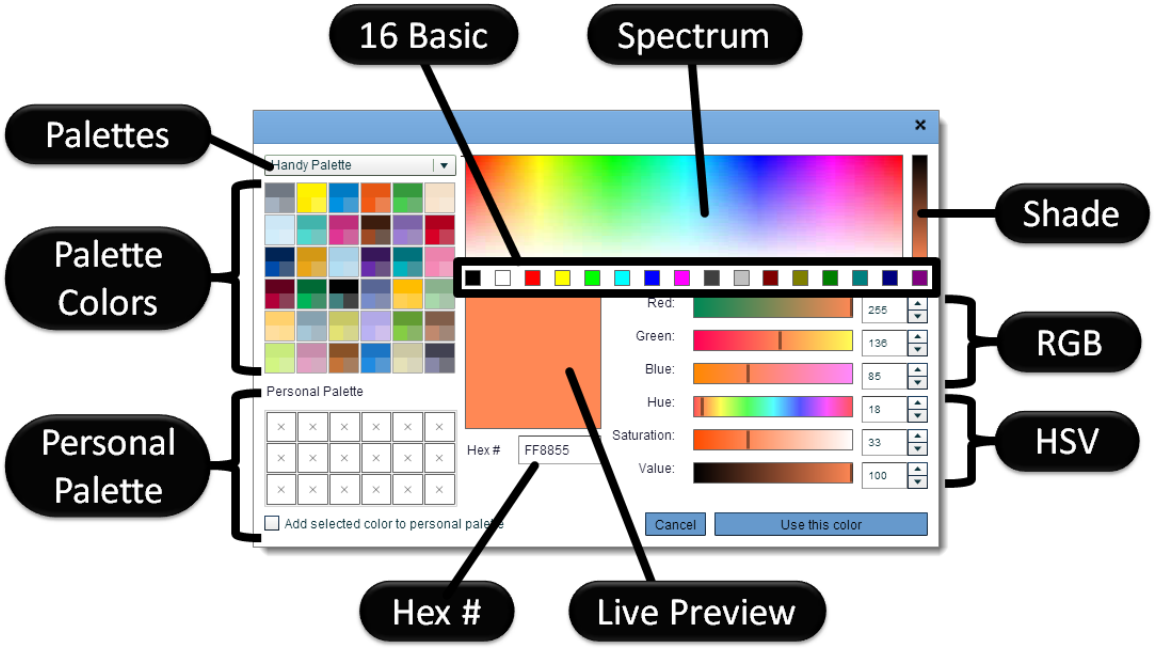


Figure 13-2

13.2 Palettes

If certain colors become common during the dashboard building process, there are two options to save a customized palette. Users can create, edit and save additional color palettes.

13.2.1 Personal Palette

Personal color palettes can contain a mixture of predefined and custom colors. The colors can be saved to a 'Personal Palette' in the lower left corner of the color picker (see Figure 13-2). This palette is not shared across the company, nor can other users access a personal palette. There can be 18 colors in a personal palette. To add a color to the Personal Palette, click on the color and then do one of the following:

- Check the 'Add selected color to personal palette' box, then click on 'Use this color'
- Drag and Drop the color swatch to the Personal Palette

To remove a color from the Personal Palette, hold the SHIFT key and click on the color swatch in the Personal Palette. Colors in the Personal Palette can be rearranged by Drag and Drop.

***Note**: A 'Personal Palette' is only available from the computer/browser used to create it. This palette will not reappear when logging in from different computers. Another user who logs into your computer/browser will see the same Personal Palette. Although users should consider this a temporary palette since it is cached by Adobe Flash, it is likely to remain available for extended periods of time.*

13.2.2 Shared Palettes

Shared color palettes can be advantageous when all users within the iDashboards environment need access to the same set of colors. The colors may be re-used in different parts of the iDashboards application, and will also be visible to other users in the organization. During the color selection process, users can change the palette to a custom shared palette and standardize the dashboard building process. There can be 100 colors in a shared palette. To create a shared color palette, see Section 13.3, "Create a Shared Color Palette".

13.3 Create a Shared Color Palette

To create a shared color palette, select 'Color Palettes...' from the Application Menu in the lower left corner of the screen. The 'Create/Edit a Color Palette' window opens (see Figure 13-3) and in this example, a palette has already been created called "Corporate Colors".

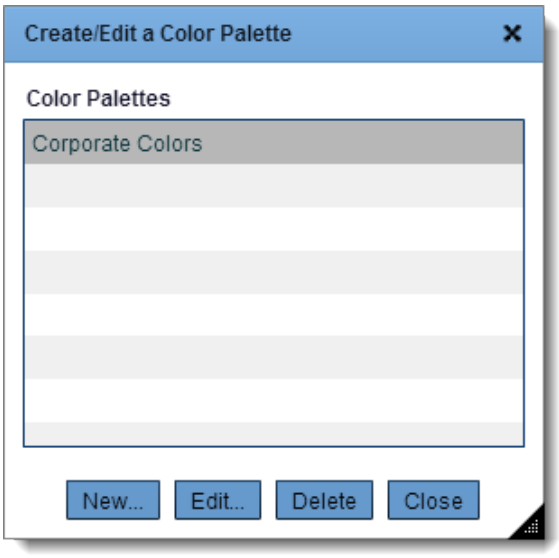


Figure 13-3

To create a new color palette, click on 'New...' A new window appears, offering various color selection options and palette settings. A new palette is being created below (see Figure 13-4). The name is called "Web Colors", and the desired colors are selected, and then added into the palette. Colors can be added by clicking the 'Add…' button, or using Drag and Drop.

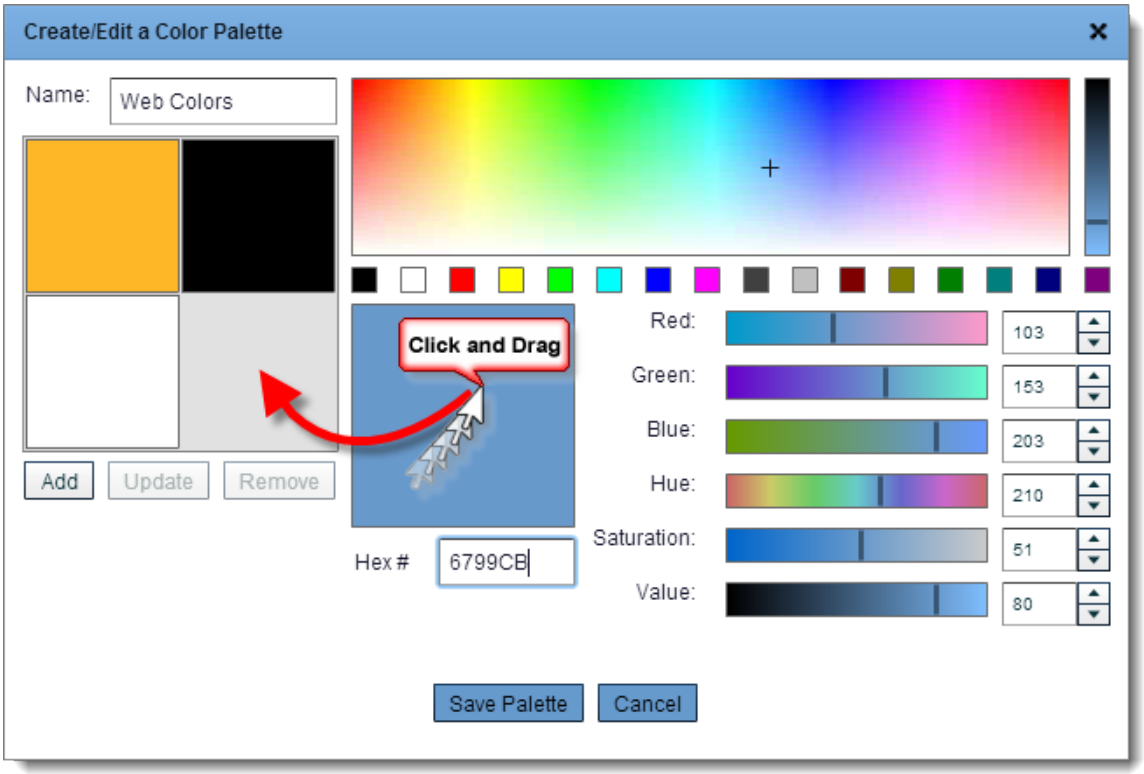


Figure 13-4

13.3.1 Name
Enter a description for the color palette (max 100 characters).

13.3.2 Add
Select a color, and then click the ‘Add’ button to add it to the color palette. Color swatches may also be dragged and dropped into the color palette.

13.3.3 Update
To replace an existing color first select a new color, then click on the swatch in the color palette, then click on the ‘Update’ button.

13.3.4 Remove
To remove a color first click on the swatch in the color palette, then click on the ‘Remove’ button. A color may also be removed by holding the SHIFT key and clicking on the color swatch.

13.3.5 Rearranging Colors
Colors in the color palette can be rearranged by drag-and-drop.

13.3.6 Save Palette
Click on the ‘Save Palette’ button to save the new color palette. If the palette contains any duplicate colors, the user will be asked whether they should be removed before saving. Saved color palettes are added to the color picker and are available to other users.

13.3.7 Edit a Color Palette
Once a color palette has been saved it can be edited. Edits allow for any type of change including renaming the color palette.

13.3.8 Delete a Color Palette
Once a color palette has been saved it can be deleted.

13.4 Use a Shared Palette
Once a shared palette has been created by an iDashboards user, the pre-defined colors can be applied any time there is an option to change a color within the dashboard or chart building process. First, click on a color button to open the color picker (see Figure 13-5). Then select the color palette from the list (see Figure 13-6).

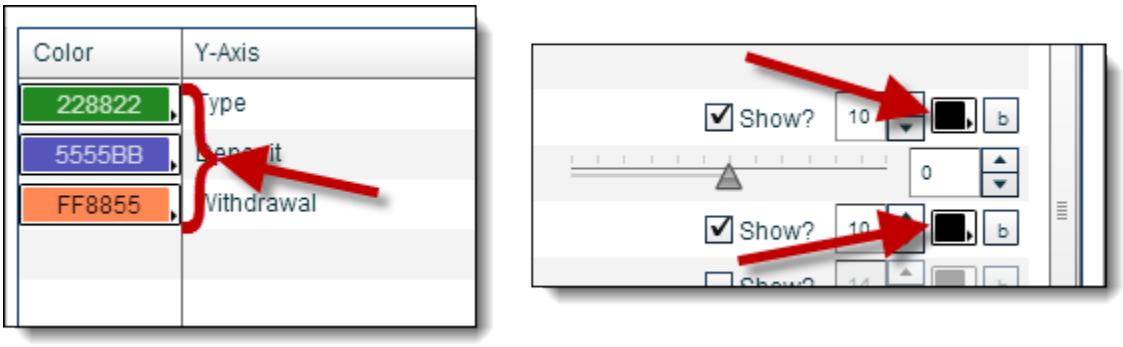


Figure 13-5

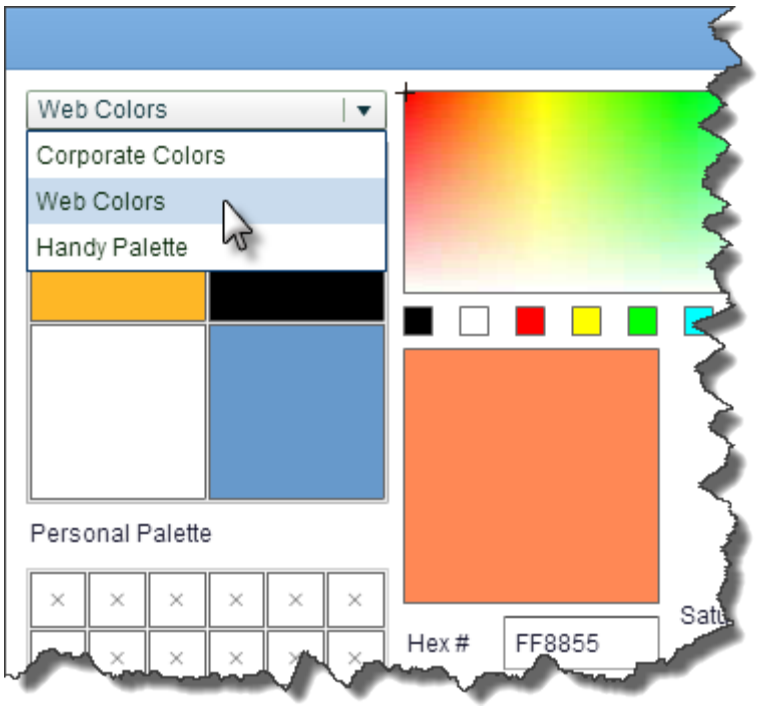


Figure 13-6

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14. Images or Flash Movies on a Dashboard

Dashboard frames can contain images or Adobe Flash Movies from sources outside of the iDashboards product. This feature allows organizations the ability to add logos, graphics, interactive movies and other external graphics to a dashboard.

Note: *Not all Flash movies will work as expected when displayed in a dashboard frame. The only way to determine if a Flash movie will display properly in a dashboard frame is to test it. If a Flash movie does not display properly in a dashboard frame, iDashboards Support cannot provide assistance in making it display properly.*

Note: *Images can be uploaded to iDashboards through the Administrator Interface. This will cause the image to appear in the selection window. Images may also be referenced by URL, but this setting requires the Administrator to enable the Proxy Server or Cross-Domain policy. See the Administrator manual for details on adjusting these settings.*

14.1 Loading an External Image/Movie to a Frame

In order to add an image or Flash movie to a frame, the image or movie file must first be uploaded to iDashboards. To place an image or Flash movie to a frame, right-click in the desired frame and select the 'Load External Image…' option from the right-click menu. Two alternatives include clicking 'Load External Image…' from the Chart Menu button of the desired frame. Or from the Dashboard Designer, highlight the desired frame, and then select the icon for placing an image. For information on the Dashboard Designer, see Section 5.3, "Dashboard Designer". Supported file types are .**SWF**, .**PNG**, .**JPEG**, and .**GIF** formats.

This menu option will bring up the **Load Image from URL** window (see Figure 14-1). Navigate the content folders on the left and select the file.

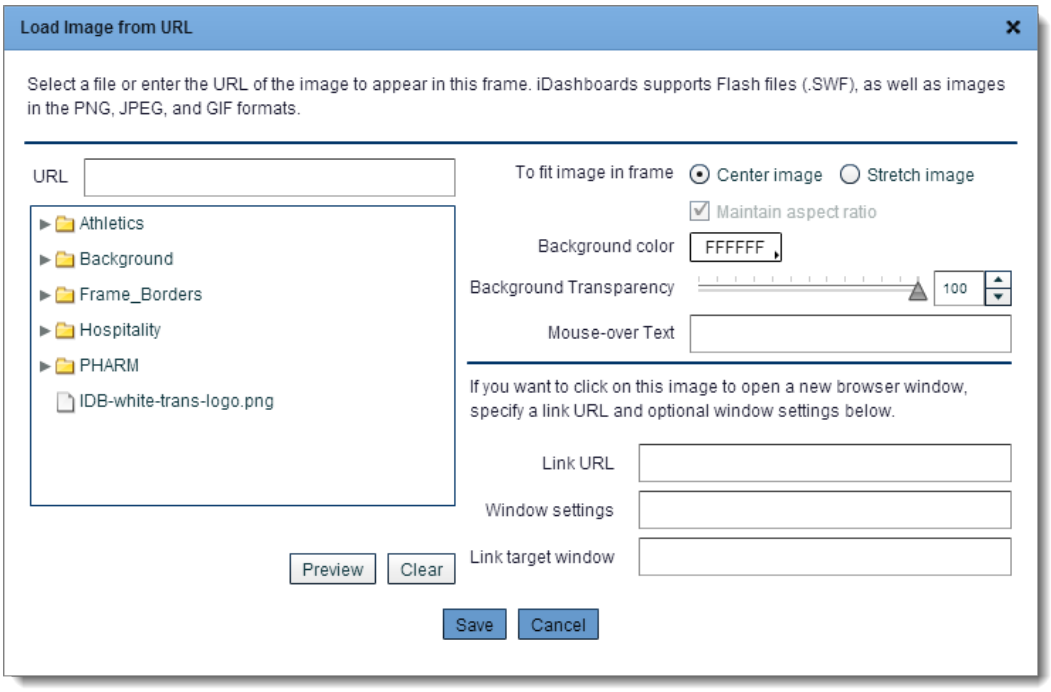

Figure 14-1

***Note**: If the proxy server settings have been enabled by the Administrator, a checkbox will appear within this window. This feature allows for linking out to an internet-hosted image file and won't require uploading the file through iDashboards Administrative Application. Check the box and place the URL of an image file (see* Figure 14-2*).*

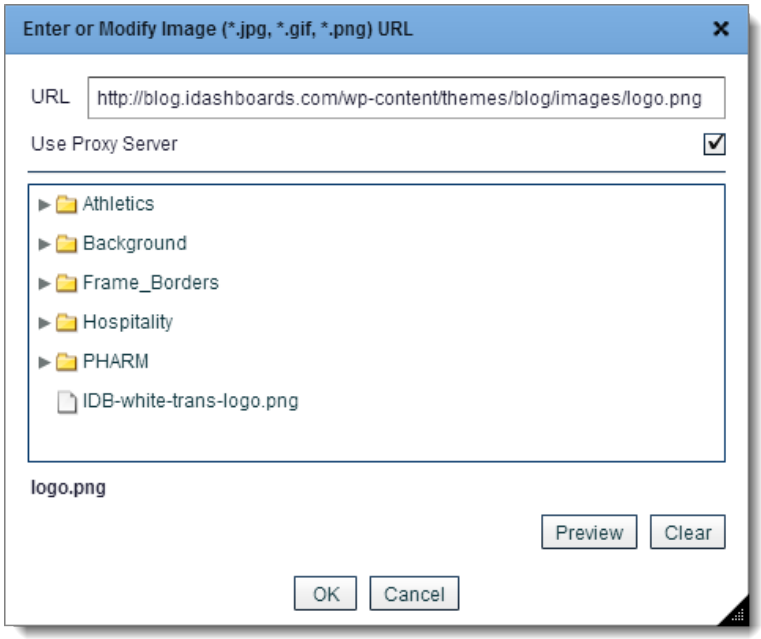

Figure 14-2

You now have the option of how you want to fit the image/movie in the frame. To center the image/movie in the frame, choose the 'Center image' option. If the image/movie size is larger than the frame, iDashboards will resize the image/move to fit the frame. If the image/movie is smaller than the frame, iDashboards will leave the image/movie size at its native resolution. To stretch the image/movie in the frame, choose the 'Stretch image' option. This option will resize the image/move as necessary to fit a smaller frame and will make the image/move as large as possible in larger frames, sometimes distorting the image/movie. The 'Maintain aspect ratio' option is only available when the 'Stretch image' radio button is selected. This option will maintain the height to width ratio of the image/move no matter the size of the frame. You also have an option of choosing the background color of the frame.

Saving the dashboard at this point will save the image/movie in the dashboard frame.

Should an image/movie get removed from the iDashboards installation or become unreachable, the following image will appear in the frame:

Figure 14-3

14.2 Linking the Image/Movie

Once an image/movie is placed in a frame there are additional options you can choose. Similar to a drilldown in a chart, you can link to an external URL. To populate this link, fill in the 'Link URL' field with either the URL of the image/movie or any HTTP web address.

There are several 'Window Settings' and 'Target Window' options that can be set when launching the separate browser. These are any standard HTML modifiers that can be assigned to a new browser window. These modifiers take the form:

```
<settingname>=<setting value>
```

Each modifier is comma separated.

(See next page for example modifiers)

Table 16 shows a list of available modifiers.

Modifier	Value	Description
width	number in pixels	Use this to define the width of the new window.
height	number in pixels	Use this to define the height of the new window.
resizable	yes or no	Use this to control whether or not you want the user to be able to resize the window.
scrollbars	yes or no	This lets you decide whether or not to have scrollbars on the window.
toolbar	yes or no	Whether or not the new window should have the browser navigation bar at the top (The back, forward, stop buttons etc.).
location	yes or no	Whether or not you wish to show the location box with the current URL (The place to type http://address).
directories	yes or no	Whether or not the window should show the extra buttons (personal buttons, etc...).
status	yes or no	Whether or not to show the window status bar at the bottom of the window.
menubar	yes or no	Whether or not to show the menus at the top of the window (File, Edit, etc...).
copyhistory	yes or no	Whether or not to copy the old browser window's history list to the new window.
screenX	number in pixels	Sets the position of the window in pixels from the left of the screen in Netscape 4+.
screenY	number in pixels	Sets the position of the window in pixels from the top of the screen in Netscape 4+.
left	number in pixels	Sets the position of the window in pixels from the left of the screen in IE 4+.
top	number in pixels	Sets the position of the window in pixels from the top of the screen in IE 4+.

Table 16

An example of a "Windows Settings" option is as follows:

```
width=1000,height=600,resizable=yes,left=0,top=0,status=yes,to
olbar=no,menubar=no
```

The 'Target Window' allows for an identification of the launched browser window so that the same browser window will be used every time an image is linked. In order for this to work, enter a word or set of characters in the field. Every time the image is clicked the URL will be launched in the same browser, not multiple browsers. Any word or set of characters can be used in the 'Target Window' field, however spaces are not allowed.

14.3 Clearing the Image/Movie

To remove an image or Flash movie from a frame, right-click in the desired frame and select the 'Clear Frame' option from the right-click menu. Two alternatives include clicking 'Clear Frame' from the Chart Menu button of the desired frame. Or from the Dashboard Designer, highlight the desired frame, and then select the icon for clearing a frame. For information on the Dashboard Designer, see Section 5.3, "Dashboard Designer".

14.4 Saving the Image/Movie in the Frame

Saving the image/movie in the frame is accomplished by saving the dashboard. Right click and choose the 'Save Dashboard' option.

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15. Dashboard Panels

A Panel is a special kind of dashboard object that is not a chart type and may not require a Data Source for populating. There are a number of options to choose from when creating a panel as they can be comprised of text, video, dashboard input parameters, or more. Panels are not saved individually but are saved as a component of the Dashboard. Therefore they cannot be opened in other frames and will need to be recreated if they are to be moved.

To place a panel into a frame, right-click in the desired frame and select the 'Add/Edit Panel…' option from the right-click menu. Two alternatives include clicking 'Add/Edit Panel…' from the Chart Menu button of the desired frame. Or from the Dashboard Designer, highlight the desired frame, and then select the icon for Adding/Editing a Panel. For information on the Dashboard Designer, see Section 5.3, "Dashboard Designer".

15.1 Choosing the Panel Type

Upon starting, a small window titled **Configure Dashboards Panel** opens. Choose the type of panel you would like to create as shown in the Figure 15-1.

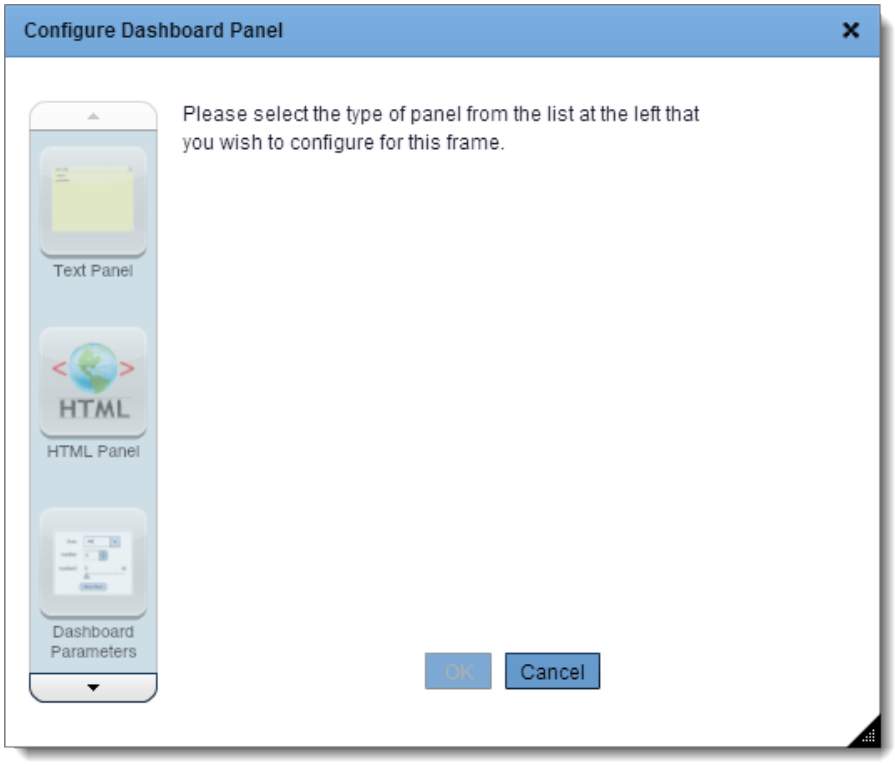

Configure Dashboard Panel
Please select the type of panel from the list at the left that you wish to configure for this frame.
Text Panel
HTML
HTML Panel
Dashboard Parameters
OK
Cancel

Figure 15-1

The options for the chosen 'Panel Type' are presented in the **Configure Dashboards Panel** window as described in the following sections.

15.2 Text Panel

A Text Panel can be used to display one or more lines of text within a frame. This is an easy to use panel with options on setting the font, font size, font color and background color of the frame. This panel cannot do bold or italicized text nor have any other item such as a graphics. A number of options can configure the Text Panel (see Figure 15-2) as described below.

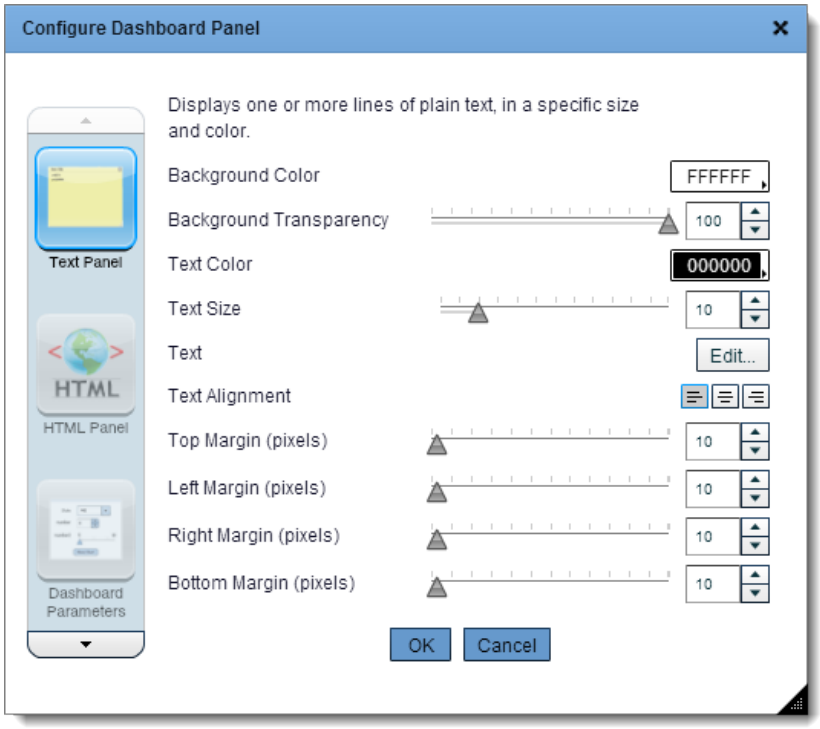


Figure 15-2

15.2.1 Background/Text Color

The panel background and text color can be controlled with the use of the color palette window. See Chapter 11, "Chart Properties: Colors" for more information about colors.

15.2.2 Background Transparency

The panel background can be set to fully transparent (100) or not transparent at all (0).

15.2.3 Text

Upon clicking the Text 'Edit …' option, a small window titled **Edit Plain Text** opens. In this window enter text to be displayed (see Figure 15-3).

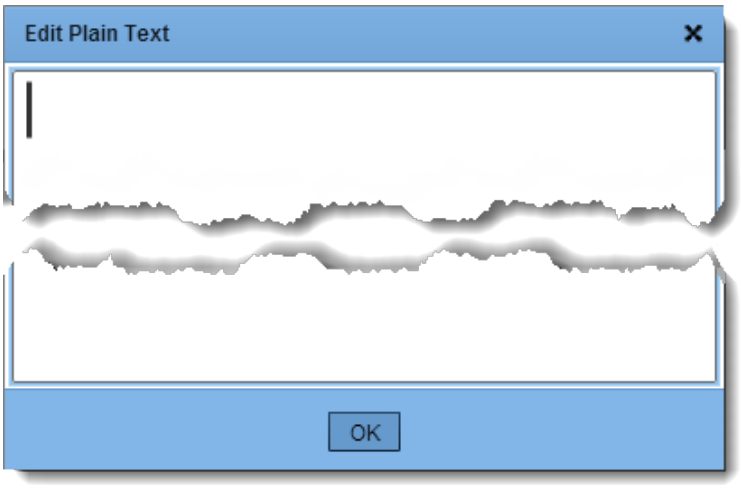


Figure 15-3

15.2.4 Margins

Text Margins allow for padding of whitespace in the regions above, below, to the right, and to the left of the text. See Section 10.1.8, "Graph Margins" for more information about margins.

15.2.5 Example

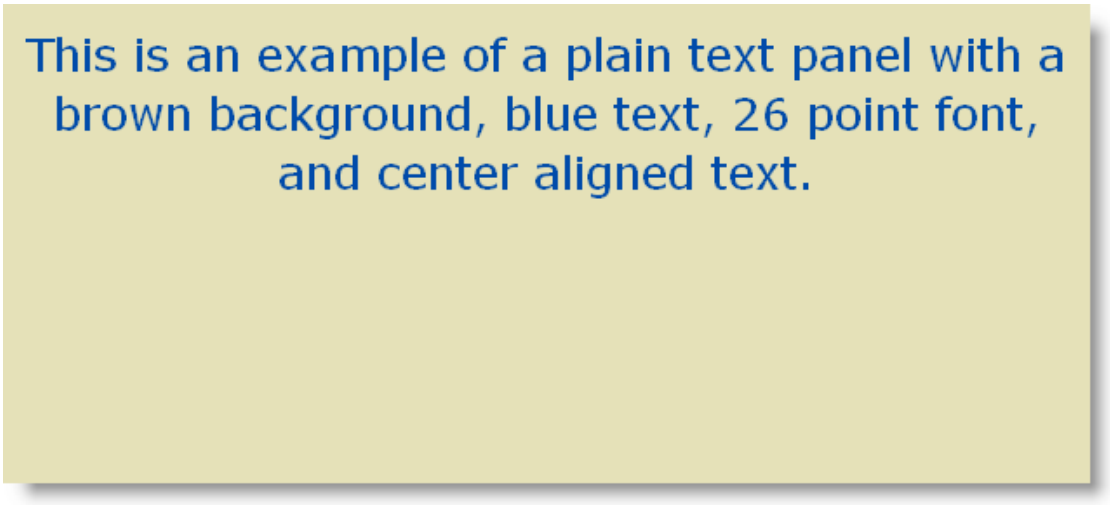


Figure 15-4

15.3 HTML Text Panel

HTML formatted text can be placed into a dashboard frame. Options include basic HTML text editing like font type, font size, font style, text alignment, text color, and text hyperlinking. Similar to the basic Text Panel, background color/transparency and margins can be changed (see Figure 15-5).

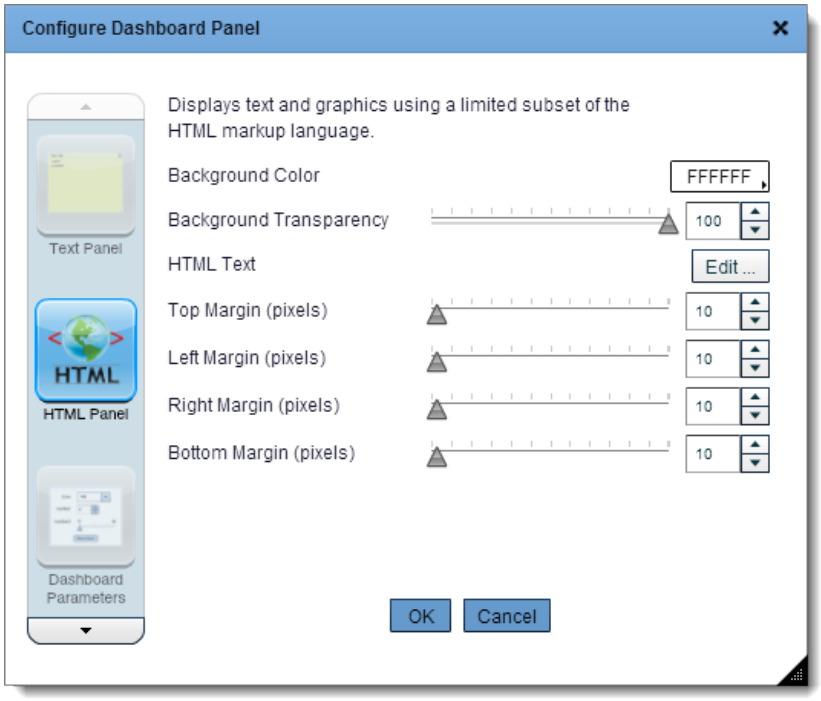


Figure 15-5

15.3.1 GUI Edit

iDashboards offers a Graphical User Interface (GUI) for simple text editing that offers a What-you-see-is-what-you-get (WYSIWYG) experience. Using this method is similar to using a word processor. Individual characters or whole words can be formatted in a variety of ways. Figure 15-6 below is an example demonstrating each available option. Use the GUI option for easy editing and the HTML option (next section) for advanced users.

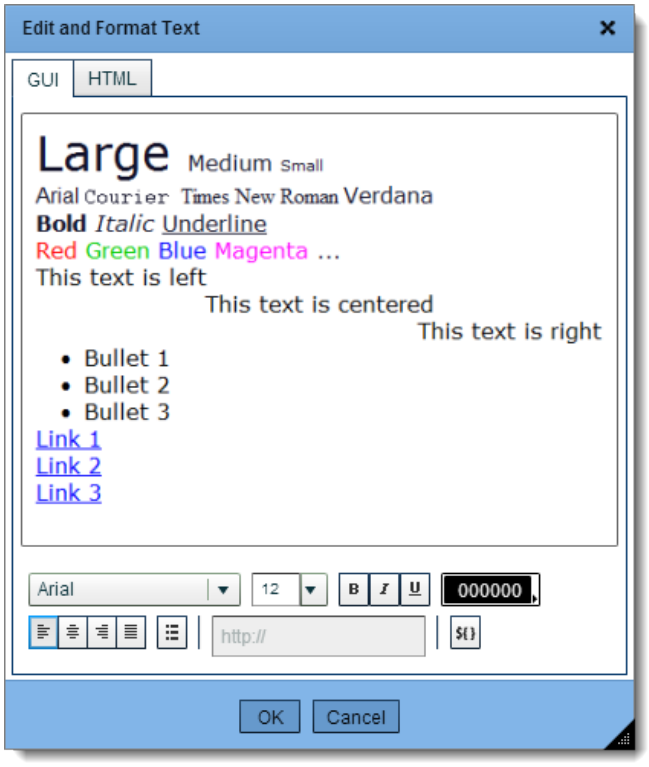


Figure 15-6

The text entered above will appear the same within the dashboard (see Figure 15-7).

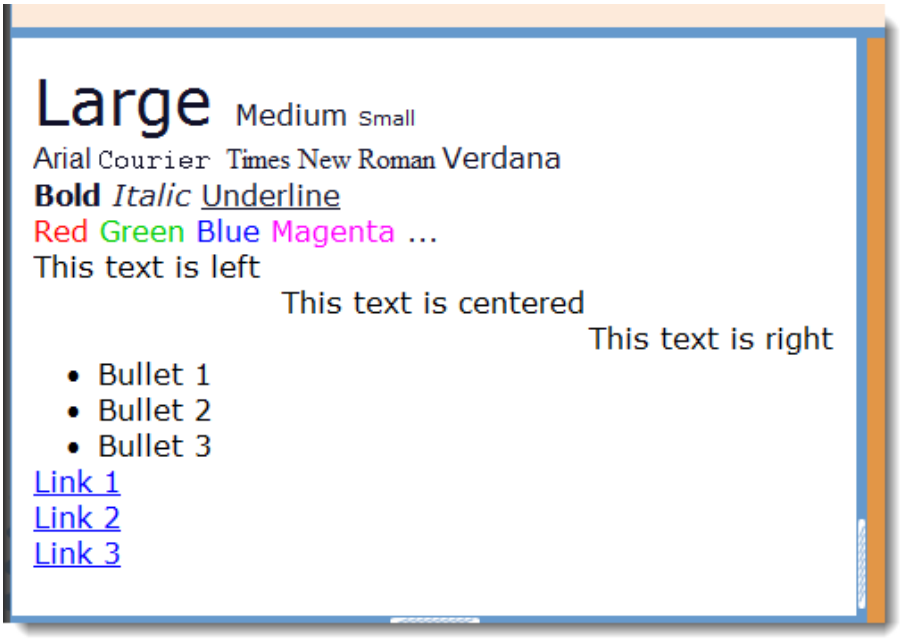


Figure 15-7

15.3.2 HTML Edit

The HTML editor allows for raw language editing. Using this method requires knowledge about writing within raw HTML. Figure 15-8 illustrates the same example above using the HTML edit window.

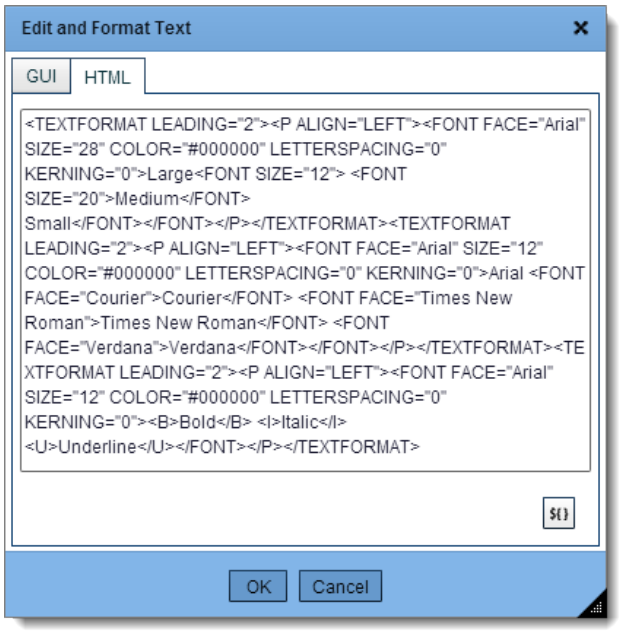


Figure 15-8

15.3.3 HTML Macros

In addition to text, the HTML editor can accept pre-defined macros. Macros are used as an alias to reference system variables. Certain macros can populate portions of the dashboard frame with: automated text, images or other references.

15.3.3.1 User Macro

If necessary, it is possible to populate a portion of the dashboard frame with the username of the person logged in. Using the macro (shown in green text) in Figure 15-9 will result in the frame displayed in Figure 15-10.

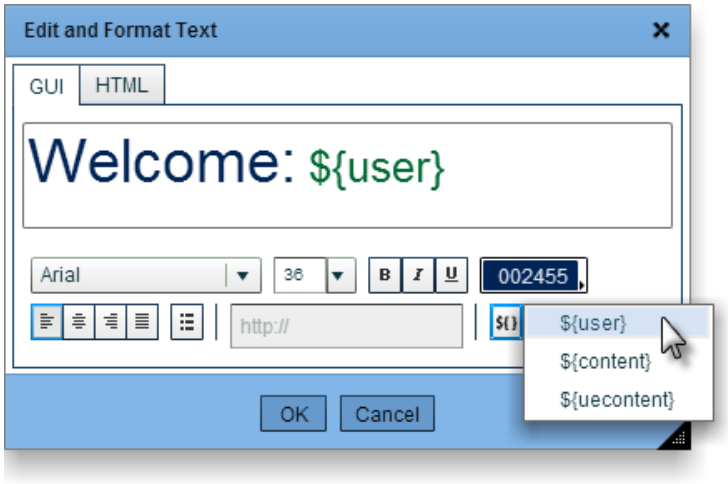


Figure 15-9

Figure 15-10

15.3.3.2 Content Macro

If an image is needed within the context of an HTML panel, it is possible to link to a file located on the iDashboards server or a file on the internet. To access this ability, use the HTML tab shown in Figure 15-11. (the HTML code can be copied using the text from the Table 17.) The text highlighted in yellow was placed into the panel by clicking on the macro button. The results of this HTML example appear in Figure 15-12.

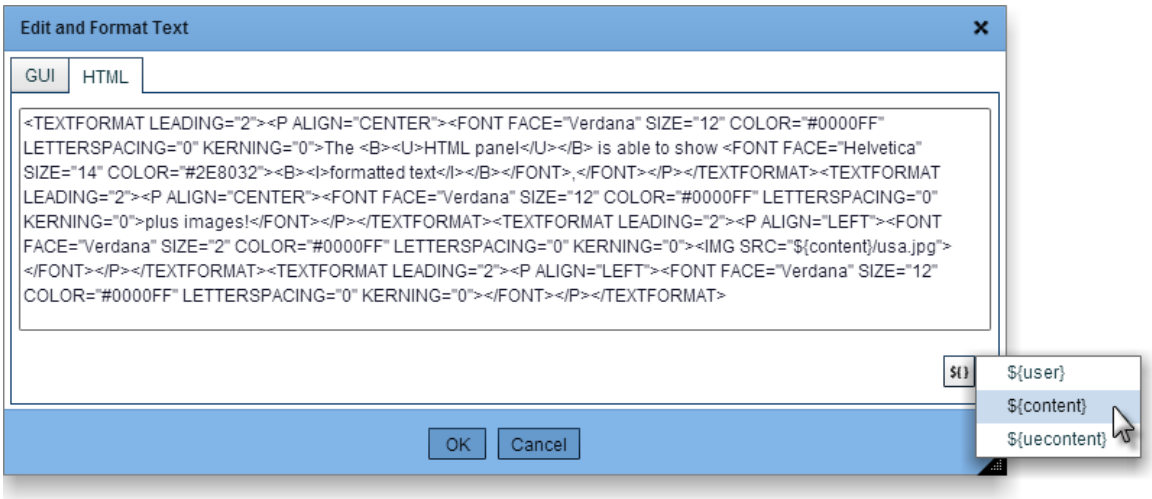


Figure 15-11

Same HTML example as above with the ability to copy/paste

```
<TEXTFORMAT LEADING="2"><P ALIGN="CENTER"><FONT FACE="Verdana" SIZE="12"
COLOR="#0000FF" LETTERSPACING="0" KERNING="0">The <B><U>HTML panel</U></B> is
able to show <FONT FACE="Helvetica" SIZE="14" COLOR="#2E8032"><B><I>formatted
text</I></B></FONT>,</FONT></P></TEXTFORMAT><TEXTFORMAT LEADING="2"><P
ALIGN="CENTER"><FONT FACE="Verdana" SIZE="12" COLOR="#0000FF" LETTERSPACING="0"
KERNING="0">plus images!</FONT></P></TEXTFORMAT><TEXTFORMAT LEADING="2"><P
ALIGN="LEFT"><FONT FACE="Verdana" SIZE="2" COLOR="#0000FF" LETTERSPACING="0"
KERNING="0"><IMG SRC="${content}/usa.jpg"> </FONT></P></TEXTFORMAT><TEXTFORMAT
LEADING="2"><P ALIGN="LEFT"><FONT FACE="Verdana" SIZE="12" COLOR="#0000FF"
LETTERSPACING="0" KERNING="0"></FONT></P></TEXTFORMAT>
```

Table 17

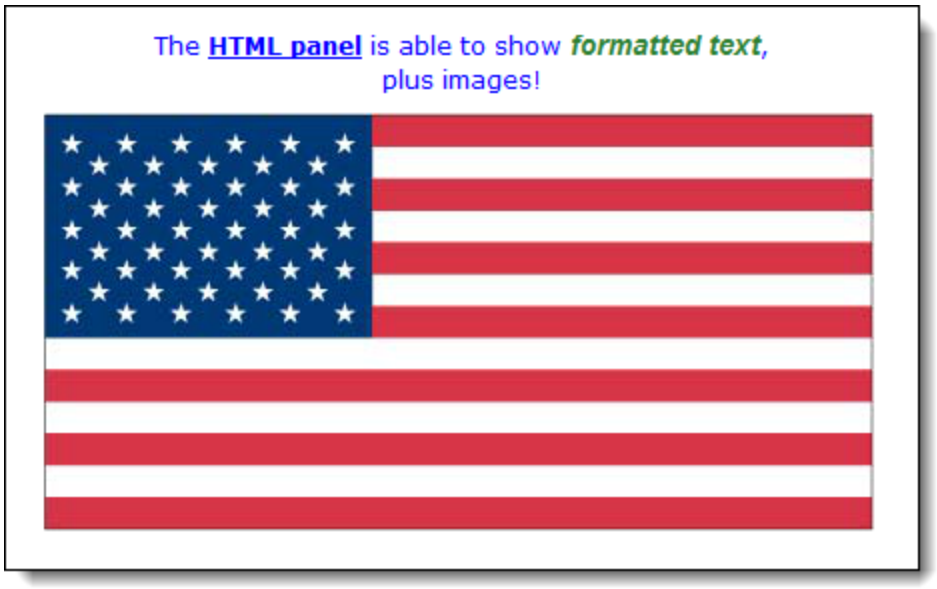


Figure 15-12

Note: *Images may be stored within sub-folders on the iDashboards server. It may be necessary to designate the folder structure when using the content macro. Example: "`${content}/Flags/NorthAmerica/usa.jpg`". See the iDashboards Administrator Manual for more information on uploading images*.

15.4 Dashboard Parameters Panel

The Dashboards Parameters panel can be used to display pre-configured Dashboard Input Parameters. A number of options can configure the Dashboards Parameters panel (see Figure 15-13) as described below.

In order for a Dashboard Parameter panel to be configured the dashboard needs to have Dashboard Input Parameters defined. See Chapter 17, “Input Parameters” for information on defining Dashboard Input Parameters.

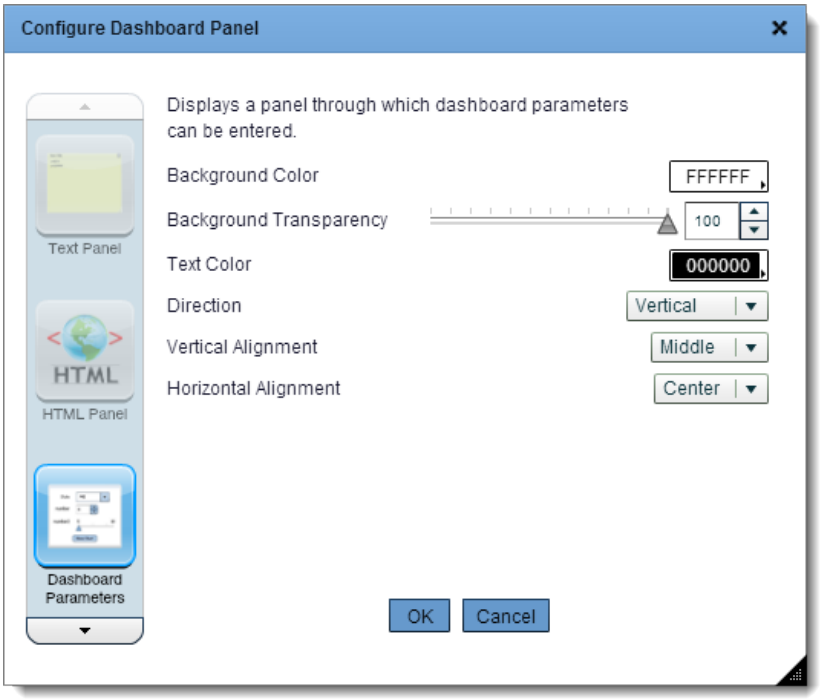


Figure 15-13

15.4.1 Background/Text Color

The panel background and text color can be controlled with the use of the color palette window. See Chapter 11, "Chart Properties: Colors" for more information about colors.

15.4.2 Background Transparency

The panel background can be set to fully transparent (100) or not transparent at all (0).

15.4.3 Direction

This option sets the orientation of the Dashboard Input Parameters within the frame. The Direction option will only be evident when there are multiple parameters since a single parameter can only have one orientation. Vertical direction (see Figure 15-14) will align the parameters on top of each other. Horizontal direction (see Figure 15-15) will align the parameters next to each other.

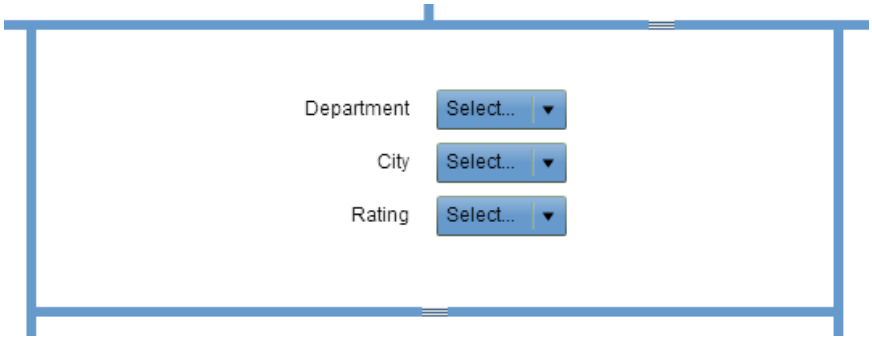


Figure 15-14

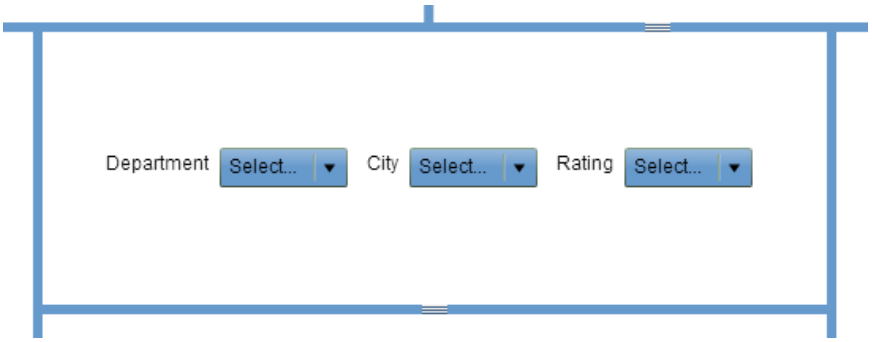


Figure 15-15

15.4.4 Vertical Alignment

Vertical Alignment allows for the placement of the parameters within the frame. This alignment allows for the vertical placement of the parameters in the top, middle, or bottom of the frame.

15.4.5 Horizontal Alignment

Horizontal Alignment allows for the placement of the parameters within the frame. This alignment allows for the placement of the horizontal parameters in the left, center, or right of the frame.

15.4.6 Example

Figure 15-16 shows an example of a parameter panel with a light grey background, horizontal direction, top vertical alignment, and left horizontal alignment.

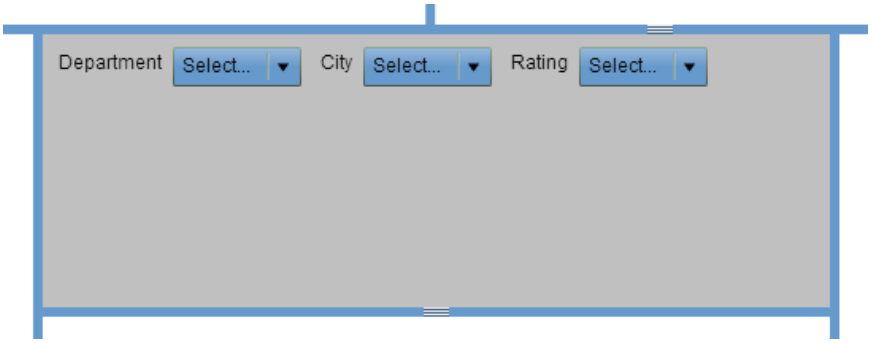


Figure 15-16

Should any of the Dashboard Input Parameters not have the ‘Refresh on Change’ checkbox option chosen then you will see an “Update” button in the frame. See Chapter 17, “Input Parameters” for more information on the option ‘Refresh on Change’.

15.5 Video Panel

Note: *The Video Panel feature is not part of the core iDashboards application. It can be optionally purchased and turned on via a new license file which will enable the functionality.*

The optional Video Panel can be used to display video messages to users. The video needs to be recorded as a streaming Flash-format video (.**FLV** extension). A number of options can configure the Video panel (see Figure 15-17) as described below.

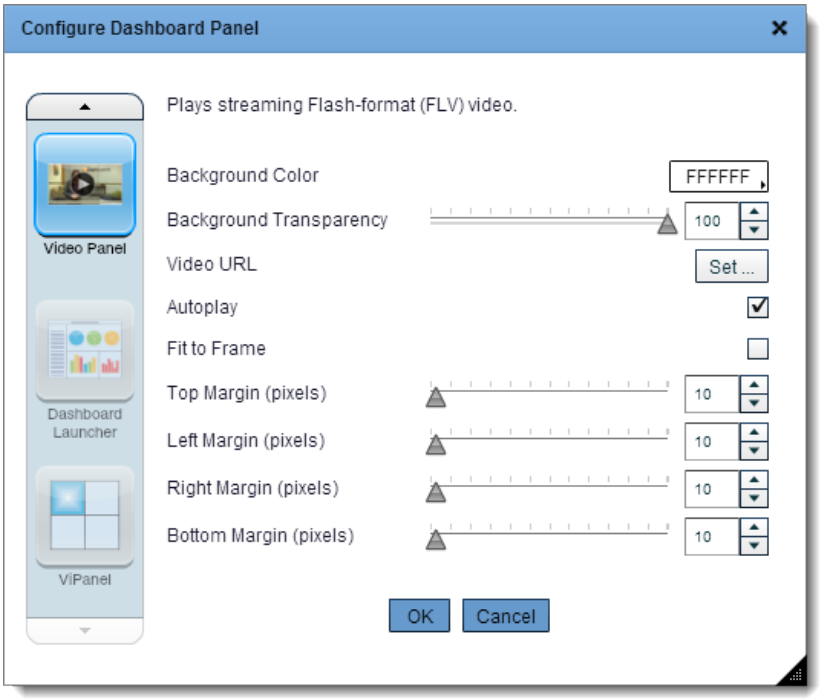


Figure 15-17

15.5.1 Video Technical Notes

Note: *Not all Flash movies will work as expected when displayed in a dashboard frame. The only way to determine if a Flash movie will display properly in a dashboard frame is to test it. If a Flash movie does not display properly in a dashboard frame, iDashboards cannot change the display limitations of that particular video or movie.*

Note: *iDashboards does not supply any video creation or editing tools.*

Note*: By default the security model for Flash can only read responses from requests from the same domain where the Flash application originated. This means that, by default, only videos that are on the iDashboards server can be displayed in the Video Panel. This security setting cannot be overridden*

15.5.2 Background Color

The panel background color can be controlled with the use of the color palette window. See Chapter 11, "Chart Properties: Colors" for more information about colors.

15.5.3 Background Transparency

The panel background can be set to fully transparent (100) or not transparent at all (0).

15.5.4 Select Video

To select a video, click the 'Set…' button on the **Configure Dashboard Panel** window. An **Enter or Modify Flash Video (FLV) URL** window (see Figure 15-18) will pop up. Choose the Flash video you would like to display in the frame. The Flash Video will need to be uploaded to the server via the iDashboards Administrator Application. Please see the iDashboards Administrator's Manual for information on uploading Flash movies.

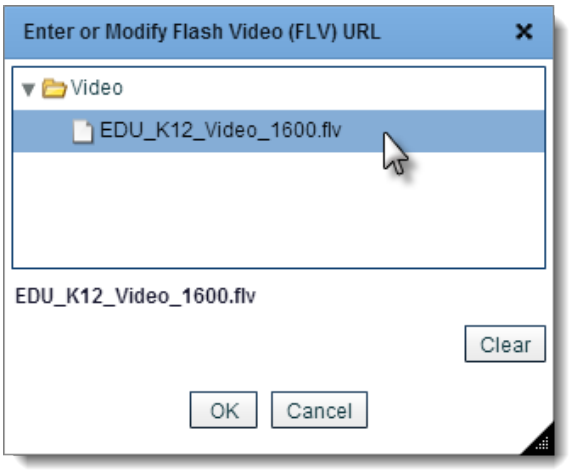


Figure 15-18

15.5.5 Autoplay

The 'Autoplay' checkbox will automatically start the video after the dashboard loads without needing to hit the play button.

15.5.6 Fit To Frame

The Fit to Frame feature will force the Flash video player to fit to near the size of the frame it is contained.

15.5.7 Margins

Margins allow for padding of whitespace in the regions above, below, to the right, and to the left of the video frame. See Section 10.1.8, "Graph Margins" for more information about margins.

15.5.8 Example

When the user highlights over the movie they will have the standard buttons available to control the video such as play/pause, stop, rewind, forward, mute and volume control (see Figure 15-19).

Figure 15-19

15.6 Dashboard Launcher

The Dashboard Launcher Panel is for viewing a list of dashboards, and then launching the dashboard (see Figure 15-20). This feature is optional and offers a customized experience for the end user. Once configured, the Dashboard Launcher will not open a new tab if the same dashboard is clicked on more than once.

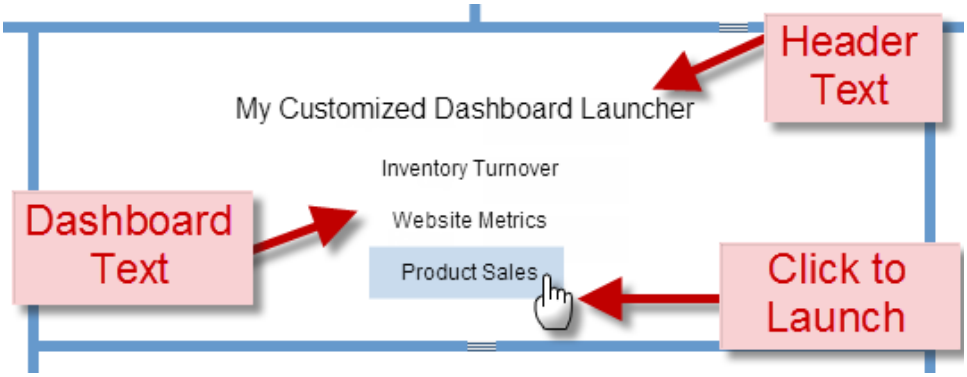


Figure 15-20

***Note**: For information on opening dashboards through the User Application, see Chapter 4, "Opening Dashboards". For information on displaying dashboards through categories or flat-lists, see Section 2.7, "Dashboard List Style".*

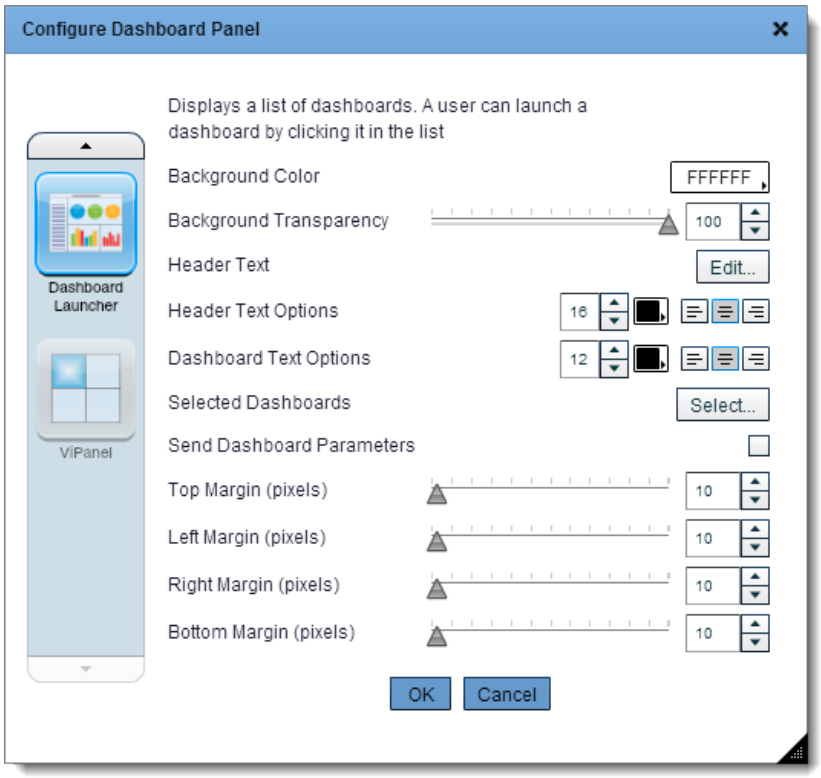


Figure 15-21

15.6.1 Background Color

The panel background color can be controlled with the use of the color palette window. See Chapter 11, “Chart Properties: Colors” for more information about colors.

15.6.2 Background Transparency

The panel background can be set to fully transparent (100) or not transparent at all (0).

15.6.3 Header Text

Upon clicking the Header Text ‘Edit …’ option, a small window titled **Edit Plain Text** opens. In this window enter the header text to be displayed at the top of the dashboard list (see Header Text in Figure 15-20).

15.6.4 Selected Dashboards

Clicking ‘Select…’ on this button will open a new window titled **Select Dashboards**. Here, the dashboards can be located and included in the **Selection** pane using the **Add** button (see Figure 15-22). The order of selected dashboards can be changed using Drag and Drop.

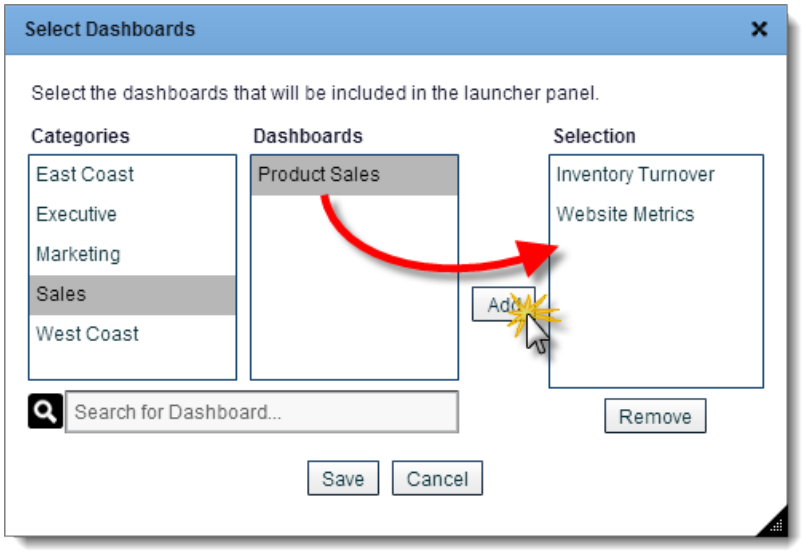


Figure 15-22

***Note**: It is not possible to select dashboards from a 'Personal' category. The 'Personal' category is purpose-built to restrict others from viewing the charts and dashboards saved within that category.*

15.6.5 Send Dashboard Parameters

If selected, the Dashboard Launcher can pass along any dashboard parameters from the source dashboard to the target dashboard (see Chapter 17, "Input Parameters" for details on input parameters). If the Target and Source dashboards share the same parameter names, the value will be applied.

15.6.6 Margins

Text Margins allow for padding of whitespace in the regions above, below, to the right, and to the left of the text. See Section 10.1.8, "Graph Margins" for more information about margins.

15.6.7 Permissions

When the dashboard builder creates a Dashboard Launcher panel, it is important to think about who has permissions to each dashboard appearing in the list. For example, if a listed dashboard is not in a category to which a user has access, then the dashboard name will not appear in the list. It is a best practice to design the dashboard list to always result in some dashboards being displayed for any user viewing the list.

15.7 ViPanel

'ViPanel' stands for *Visually Interactive Panel*. It is a functionality which allows a dashboard builder to place a custom developed application into a dashboard. iDashboards can develop custom ViPanel Applications to fill a variety of needs. iDashboards administrators may retrieve these applications, and their documentation, by going to Oskar, the Online Support & Knowledge Acquisition Repository at https://oskar.idashboards.com. From there,

the ViPanel Applications can be downloaded and installed through the Administrative Application.

***Note**: ViPanel Applications are not supported on iOS devices. ViPanel Applications may not function on Android devices. Although the dashboard will continue to launch, the ViPanel frame will appear blank.*

***Disclaimer**: ViPanels may, in some cases, depend on third-party web services or APIs. In such cases, there is no warranty that any particular software functionality provided through such ViPanels will continue to function. In all such cases, iDashboards does not promise to repair or replace the affected functionality.*

ViPanel Applications have their own custom properties. But all ViPanels share a set of basic properties are available (see Figure 15-23).

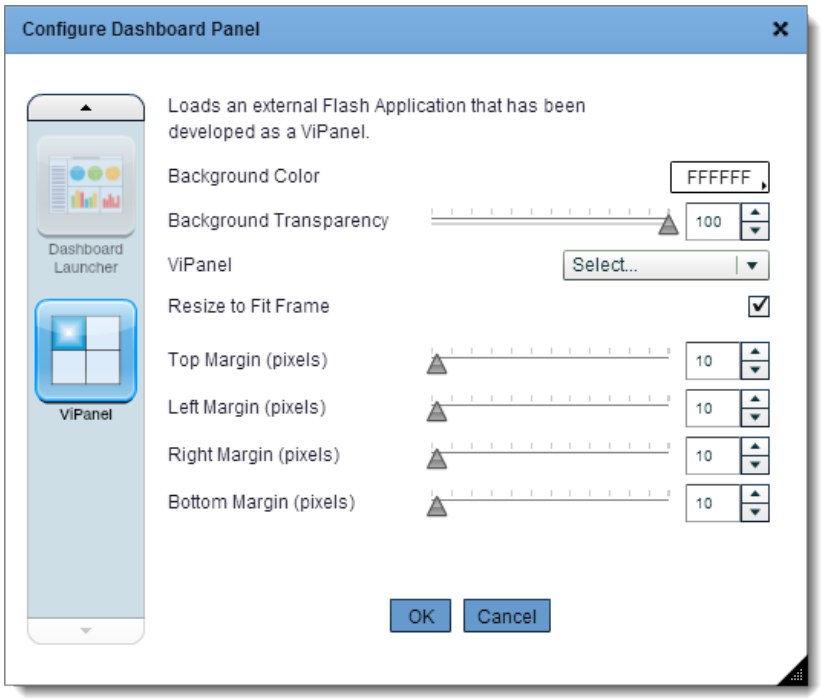


Figure 15-23

15.7.1 Background Color

The panel background color can be controlled with the use of the color palette window. See Chapter 11, “Chart Properties: Colors” for more information about colors.

15.7.2 Background Transparency

The panel background can be set to fully transparent (100) or not transparent at all (0).

15.7.3 ViPanel

Upon clicking the Text 'Select …' option, a dropdown list will appear with all of the available ViPanel Applications. If no applications are found, see your iDashboards administrator. Once a ViPanel Application is selected, a unique set of properties will become available.

See the beginning of this section for information on obtaining documentation on specific ViPanel Applications.

15.7.4 Resize

Selecting this option will allow the ViPanel Application to display at the fullest extents of the frame size.

15.7.5 Margins

Text Margins allow for padding of whitespace in the regions above, below, to the right, and to the left of the text. See Section 10.1.8, "Graph Margins" for more information about margins.

15.7.6 ViPanel Examples

15.8 Saving and Removing Panels

As stated in the beginning of this chapter, panels are a component of a dashboard and do not exist as a separate object (like charts do). Therefore, in order to save a panel, you need to save the dashboard it exists within. To remove a panel from a frame, right-click in the desired frame and select the 'Clear Frame' option from the right-click menu. Two alternatives include clicking 'Clear Frame' from the Chart Menu button of the desired frame.

Or from the Dashboard Designer, highlight the desired frame, and then select the icon

for clearing a frame. For information on the Dashboard Designer, see Section 5.3, “Dashboard Designer”.

16. Advanced Chart Features

16.1 Using the Pivot Feature

Pivots are a feature that can be added to any chart that allows a user to, in real time, select values to filter the chart on. This gives the user the ability to view various slices of the multidimensional data the chart represents. When a user selects a specific value in a pivot, the chart refreshes with information filtered for that specific value. The number of pivots that can be designed into any chart is unlimited.

Using pivots is optional. A pivot is created when you designate one or more of your Y-axis as a Pivot. The ability to assign a pivot is only activated when there are at least 2 or more Y-axes. If there are 3 or more Y-axes, multiple pivots may be applied.

16.1.1 Creating a Pivot

To create a chart with a pivot, you must have the Analyst or Administrator role. Table 18 shows sample data with "Sales" as a measure for various branch offices in various states. The objective is to create a chart with "State" being a pivot, and depending upon the selected value of "State" in the pivot, the chart displays the Sales in the cities with that specific "State".

City	State	Sales
Los Angeles	CA	8826236
Modesto	CA	1874646
Oakland	CA	3857576
Sacramento	CA	2872657
San Diego	CA	7982364
San Francisco	CA	6726354
Denver	CO	454334
Boulder	CO	234234
Fort Collins	CO	764456
Grand Junction	CO	746456
Englewood	CO	656345
Lafayette	CO	45673
Belleville	IL	1138565
Bloomington	IL	2495768
Chicago	IL	4186900
Joliet	IL	2222500
Rockford	IL	1923000
Springfield	IL	3098877
Ann Arbor	MI	1450988
Detroit	MI	2783473
Grand Rapids	MI	1873457
Lansing	MI	876234
Midland	MI	483475
Traverse City	MI	345877

City	State	Sales
Duluth	MN	329809
Eagan	MN	569870
Minneapolis	MN	1456967
Rochester	MN	976543
St. Cloud	MN	2587326
St. Paul	MN	1128765
Albany	NY	135498
Buffalo	NY	587626
New York City	NY	1876578
Rochester	NY	593726
Syracuse	NY	132545
Utica	NY	486272
Austin	TX	3457546
Dallas	TX	18023745
Fort Worth	TX	1836456
Houston	TX	14072623
Plano	TX	4892376
San Antonio	TX	2237565

Table 18

First, create a new chart with ‘City’ as the X-axis label and ‘State’ and ‘Sales’ as the two Y-axis labels (see Figure 16-1). Click on the “Import Data” button.

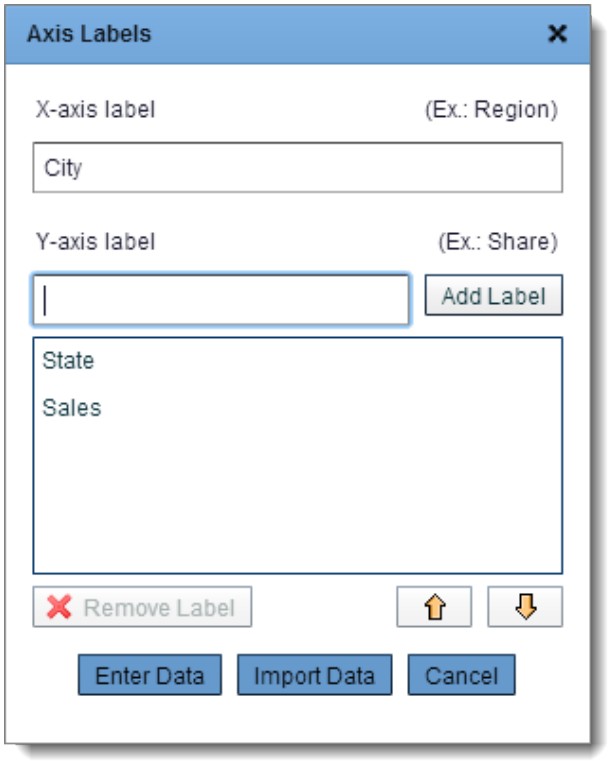


Figure 16-1

Next, select the appropriate data source and assign the data source columns to the respective X and Y labels (if you are not familiar with these steps, see Chapter 7, “Creating Charts: Dynamic Data”). To create a pivot, you need to expand the Pivot dropdown box for the Y-axis of your choosing and select “1” (see Figure 16-2).

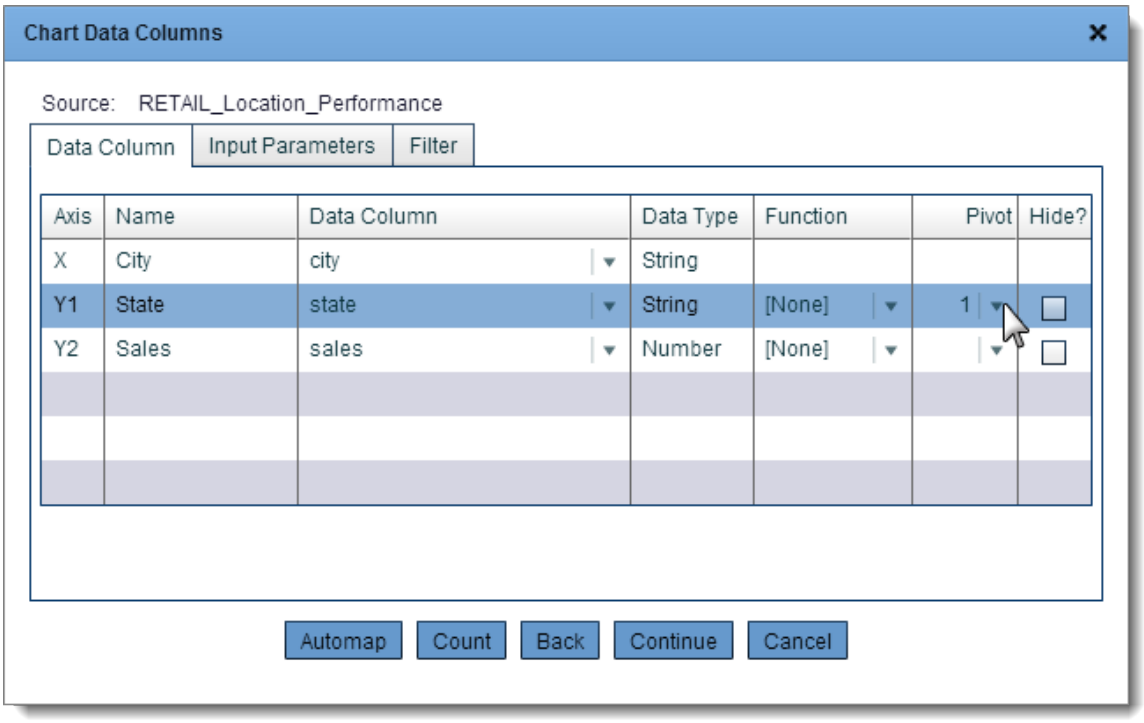


Figure 16-2

Complete the chart creation process by selecting a chart type. When the chart is drawn, there will be a pivot on the "State" information (see Figure 16-3).

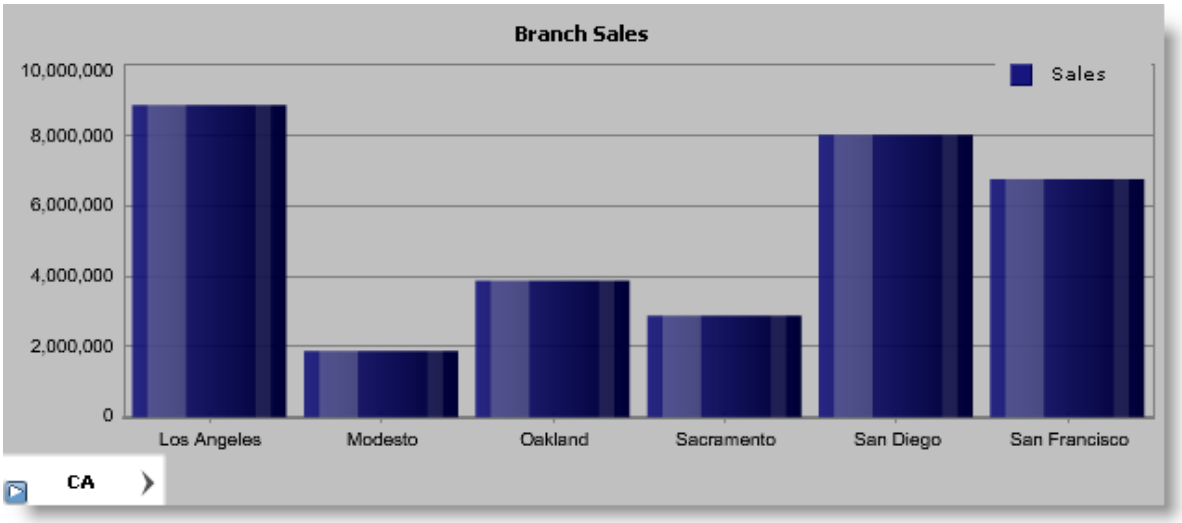


Figure 16-3

Clicking on the pivot will bring up a popup menu of all distinct items in the pivot column (see Figure 16-4).

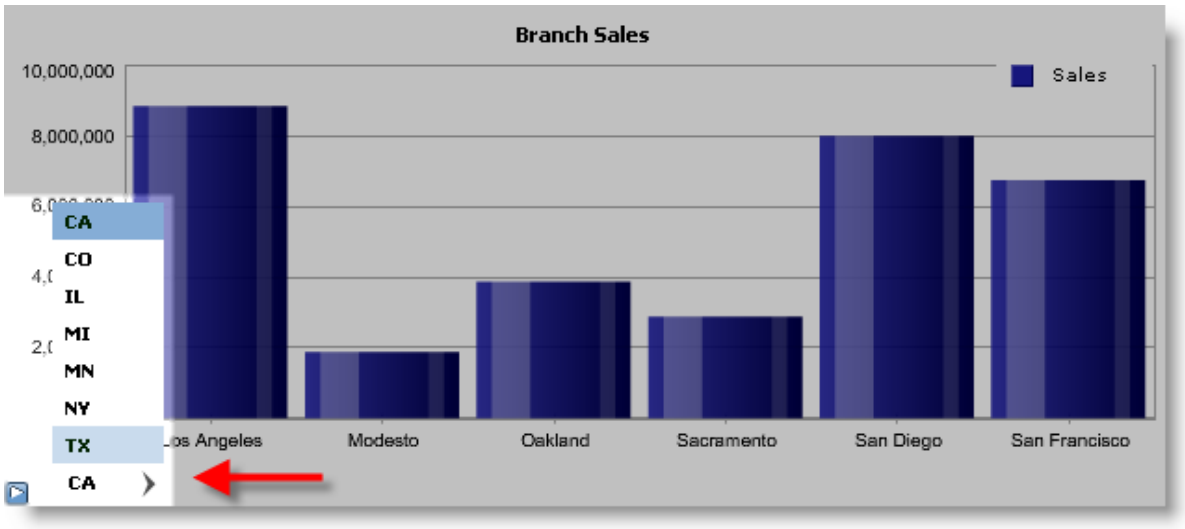


Figure 16-4

If you select a different value in the menu, the chart reloads to reflect data pertinent to the new pivot value (see Figure 16-5).

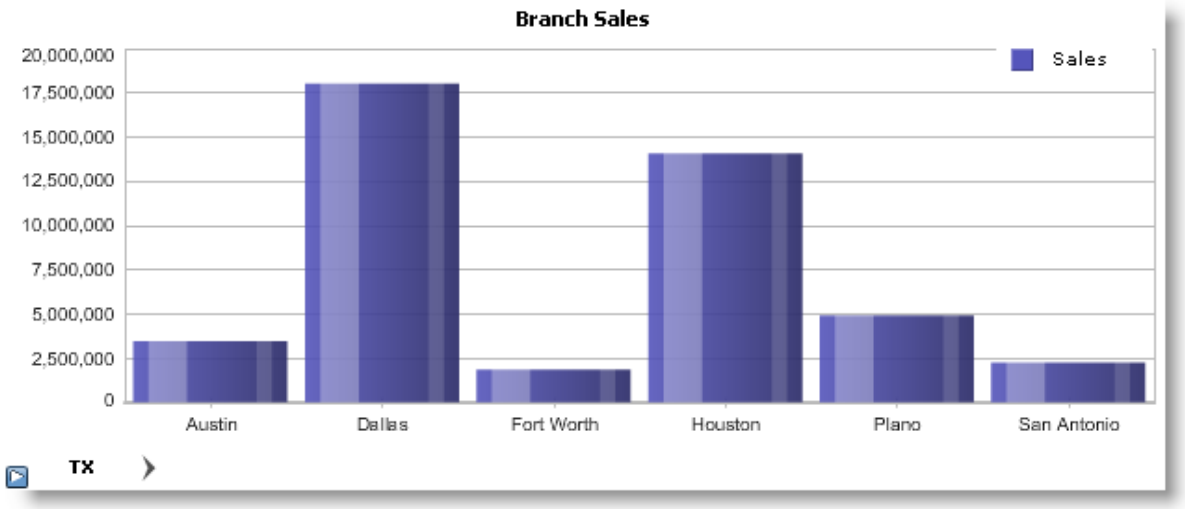


Figure 16-5

16.1.2 Customizing Pivots

If you include pivot(s) in a chart, the Features tab of the **Chart Properties** dialog box will include a section where you can customize the behavior of the pivot(s) (see Figure 16-6). If you don't have a pivot(s) in your chart, these options will not be visible.

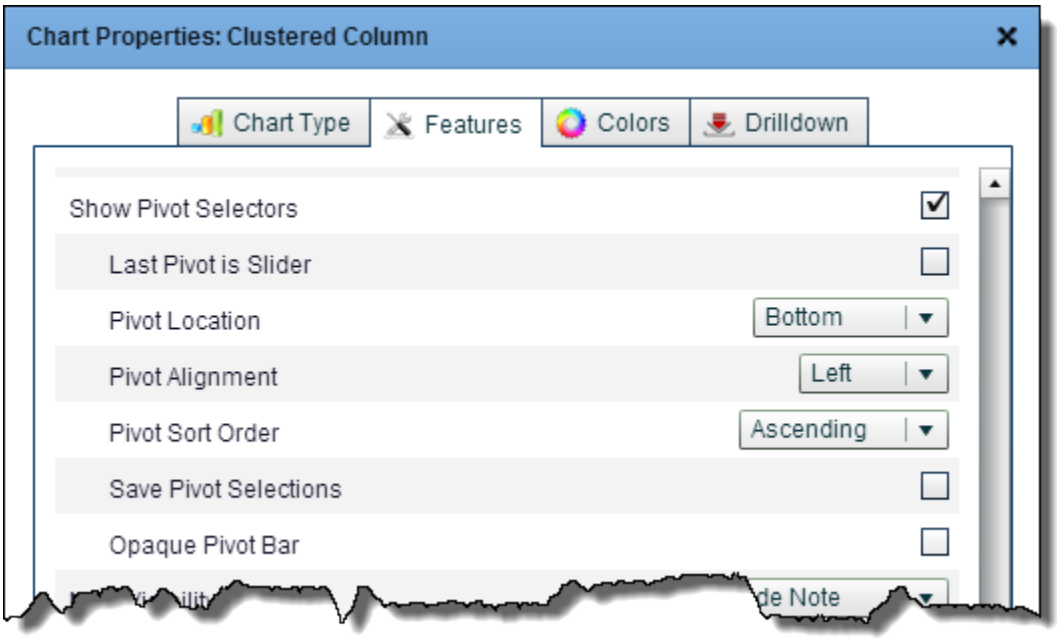


Figure 16-6

Show Pivot Selectors – This option is checked by default. If you uncheck it, your pivots will still exist in the chart but they will not be visible for a user to select and change their value(s). The only situation you would want to hide the pivot selectors is if you don't want the pivot selectors to take up real estate on your chart AND the chart is a target chart for a drilldown (see Chapter 12, "Chart Properties: Drilldowns" for more information on drilldowns). With the chart acting as a target chart for a drilldown, its pivot values can be selected even with the pivot selectors hidden.

Last Pivot is Slider - This option is unchecked by default. If you check it, the last Y-axis that is designated as a pivot will be shown as a slider bar, not a dropdown list. If only one pivot exists in the chart and you check this option, it will be shown as a slider bar.

Pivot Location – You can designate where the pivot selector(s) is placed; bottom of the chart (default), top of the chart or under the chart title.

Pivot location can also be set using the chart menu button. If dashboard properties are set to 'Show chart-menu buttons', select the button and the select 'Pivot Location' (see Figure 16-7).

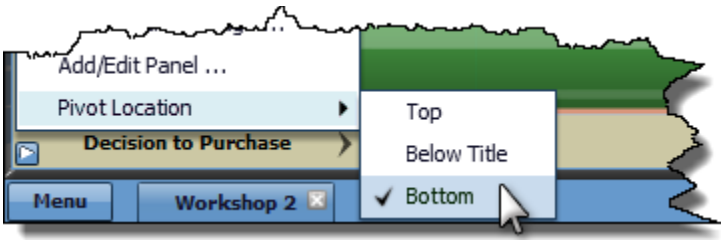


Figure 16-7

Changing the pivot location using this method will not invoke a save to the chart. Therefore, viewers could temporarily change the pivot location.

Pivot Alignment - You can designate how the pivot selector(s) is aligned; left (default), right or center.

Pivot Sort Order - Sorting the pivot allows chart data to be sorted in a pre-defined order. The data can be sorted ascending, (a-z, 1-10) or descending (z-a, 10-1). Pivot data can be sorted by choosing the column in the “Pivot Sort Order” dropdown menu. The sort order is ascending by default.

Save Pivot Selections - This option is unchecked by default. With it unchecked, every time you open or refresh a chart that contains a pivot(s), the pivot selectors will display the first pivot selection from the data source, no matter what values were selected the last time the chart was saved. If you check this option, every time you open or refresh a chart that contains a pivot(s), the pivot selectors will be set to the values that were selected the last time you saved the chart.

Opaque Pivot Bar - If checked, this option will make the pivot bar transparent, therefore allowing any dashboard color or image to show through where the pivot selectors are displayed. If unchecked, the chart background color will be displayed.

16.2 Using the Hide Feature

Hiding a column is optional (see Figure 16-8). You can set this functionality in the **Chart Data Columns** window as you build a chart or by right-clicking on a chart, choosing ‘Chart Data’ then ‘Modify Chart Data Columns’.

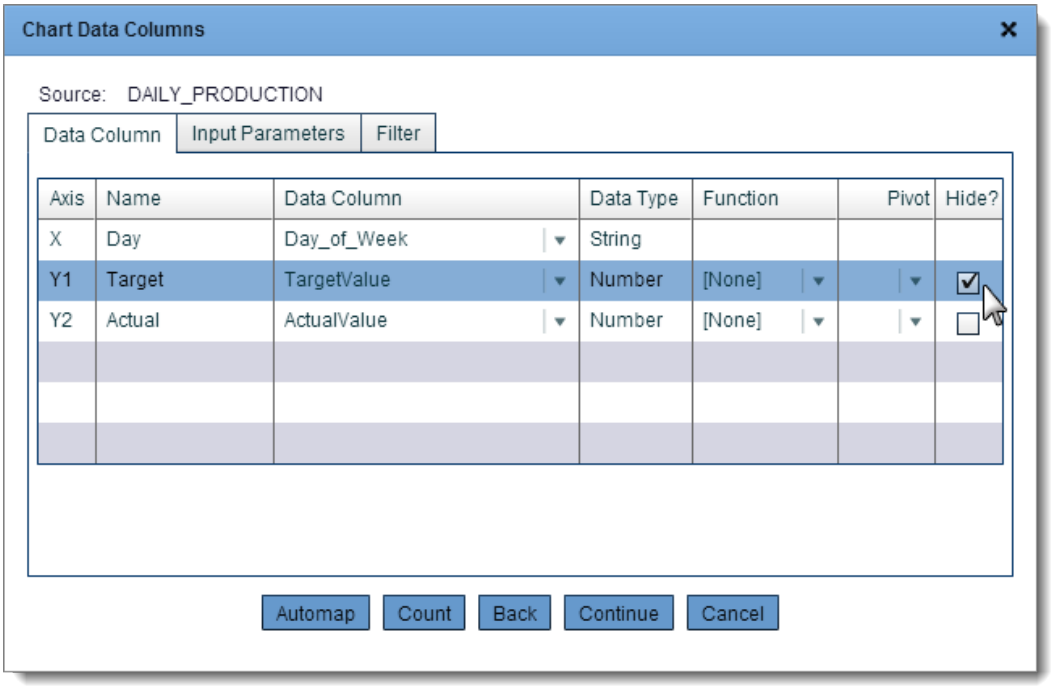


Figure 16-8

Notice in the following figure, resulting from Figure 16-8, the Target axis is not visible in the chart (see Figure 16-9). One reason for using the hide feature is to allow sorting based on values that are not displayed graphically.

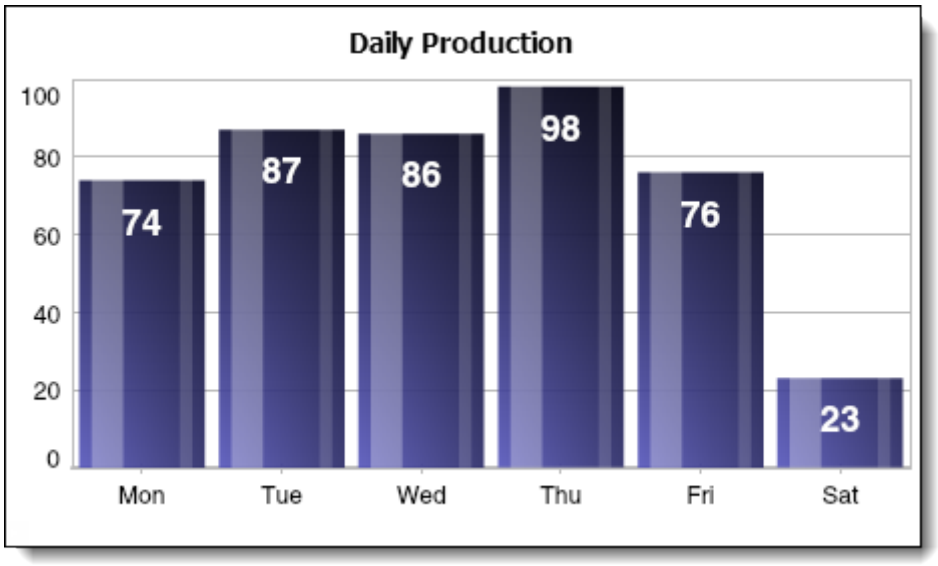


Figure 16-9

16.3 Using the Function Feature

iDashboards provides the ability to aggregate Y-axis data columns by using the "Function" feature on the **Chart Data Columns** window. For each of the available Functions (Sum, Avg, Max, Min and Count), the function will be performed on the Y-axis values, which are grouped by each unique X-axis value. For example, if you have a table with 1000+ rows of data and a "City" X-axis with only 6 unique cities, the function will aggregate all of the rows of data for each city, resulting in a tableset of only 6 rows.

Note: The Datetime or String column types can only use the Count summary option

Consider the following dataset (see Table 19). It shows sales figures for various cities, in 8 state

STATE	CITY	CITYSALES
CT	New Haven	3445454
CT	Windham	9976433
CT	Fairfield	2323232
CT	New London	2002029
CT	Middlesex	3232333
CA	Los Angeles	8826236
CA	Modesto	1874646
CA	Oakland	3857576
CA	Sacramento	2872657
CA	San Diego	7982364
CA	San Francisco	6726354
CO	Denver	454334
CO	Boulder	234234
CO	Fort Collins	764456
CO	Grand Junction	746456
CO	Englewood	656345
CO	Lafayette	45673
IL	Belleville	1138565
IL	Bloomington	2495768
IL	Chicago	4186900
IL	Joliet	2222500
IL	Rockford	1923000
IL	Springfield	3098877
…	…	…
MI	Ann Arbor	1450988
MI	Detroit	2783473
MI	Grand Rapids	1873457
MI	Lansing	876234
MI	Midland	483475
MI	Traverse City	345877
MN	Duluth	329809
MN	Eagan	569870
MN	Minneapolis	1456967
MN	Rochester	976543
MN	St. Cloud	2587326
MN	St. Paul	1128765
NY	Albany	135498
NY	Buffalo	587626
NY	New York City	1876578
NY	Rochester	593726
NY	Syracuse	132545
NY	Utica	486272
TX	Austin	3457546
TX	Dallas	18023745
TX	Fort Worth	1836456
TX	Houston	14072623
TX	Plano	4892376
TX	San Antonio	2237565

Table 19

In the example displayed in Figure 16-10, the configuration would return chart data as a sum of CITYSALES, grouped by STATE.

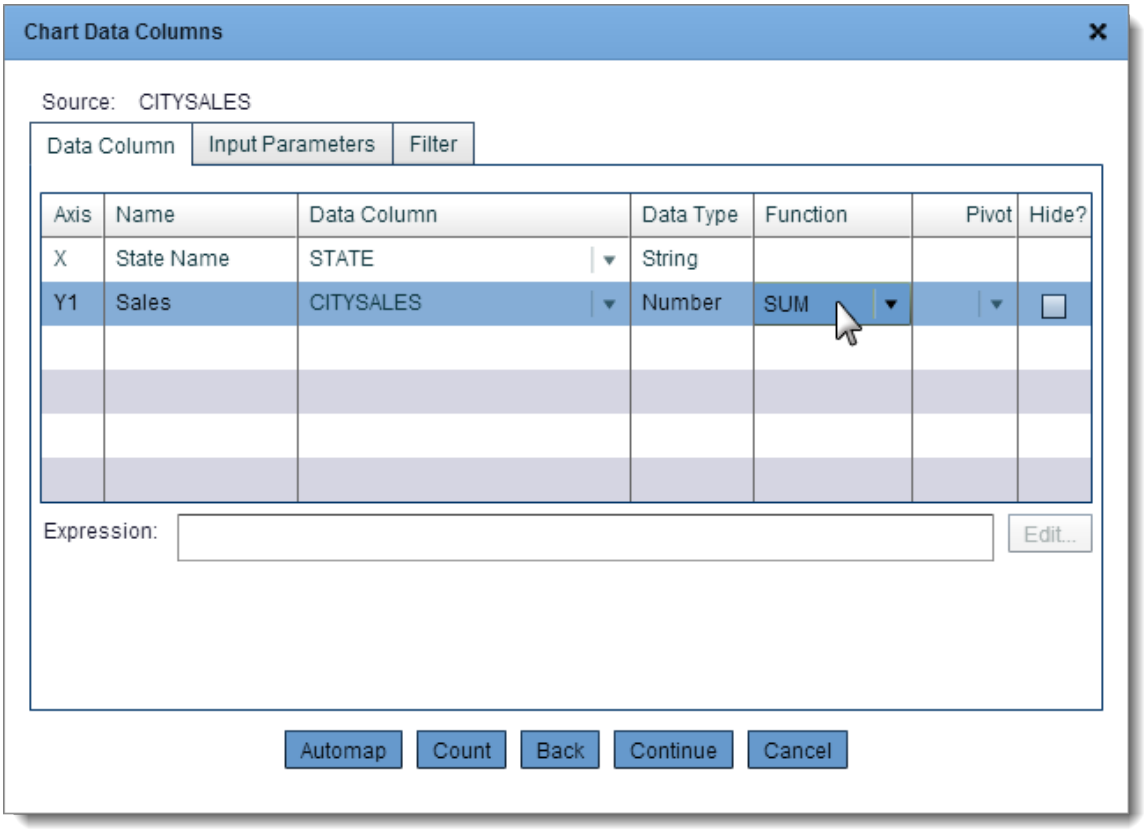


Figure 16-10

Figure 16-11 shows a Tabular chart with the summarized data, only requiring 8 rows.

State Name	Sales
CA	$32,139,833
CO	$2,901,498
CT	$20,979,481
IL	$15,065,610
MI	$7,813,504
MN	$7,049,280
NY	$3,812,245
TX	$44,520,311

Figure 16-11

If CITYSALES wasn't summed, the chart would display a row of sales data for each city; looking the same as the original data set.

16.4 Using Filters

Filters can be a logical AND or OR condition if you are filtering on multiple columns. The default logic is AND. To set up a filter:

1. Right click on the chart and choose 'Chart Data…'.
2. Click the 'Modify Chart Data Columns' button (see Figure 16-12).

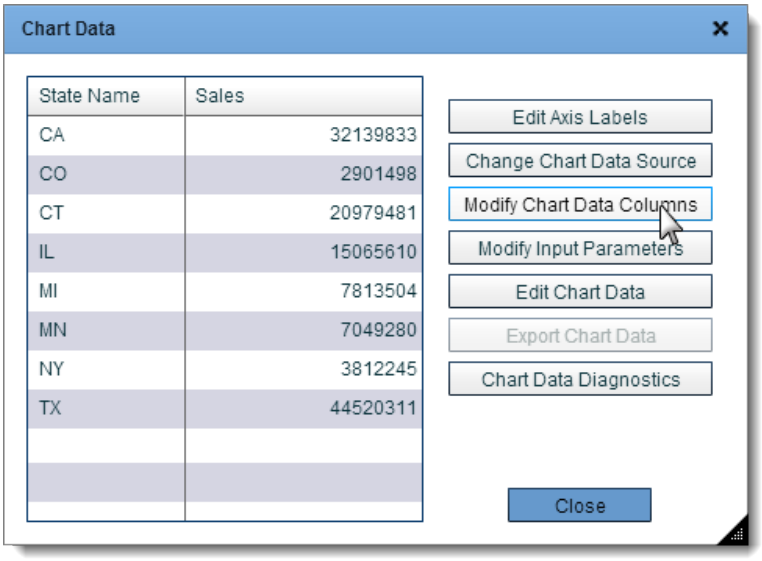


Figure 16-12

3. Click the 'Filters' tab at the top of the **Chart Data Columns** window (see Figure 16-13).

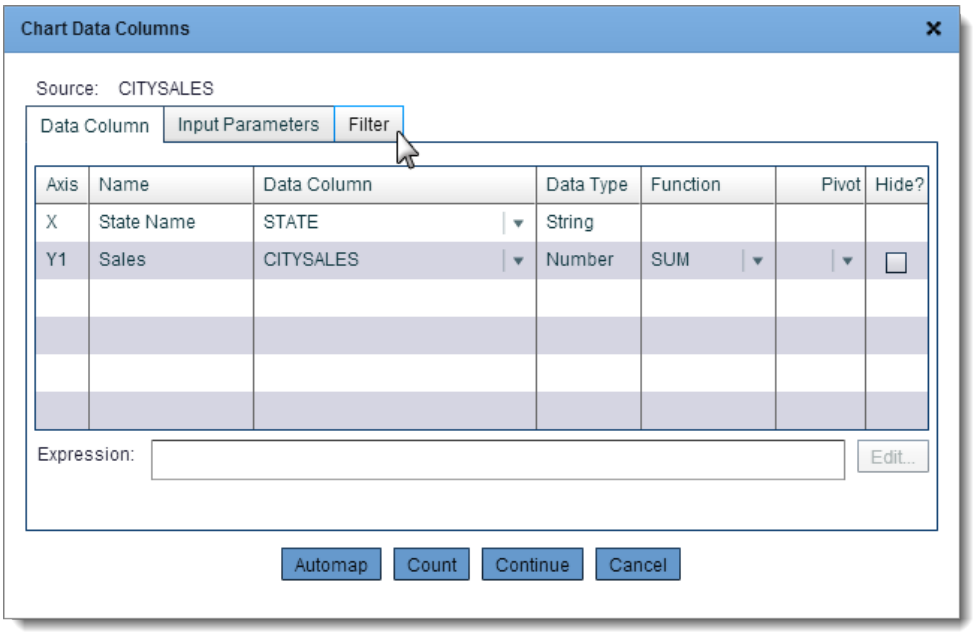


Figure 16-13

4. Click the 'Add Filter' button (see Figure 16-14).

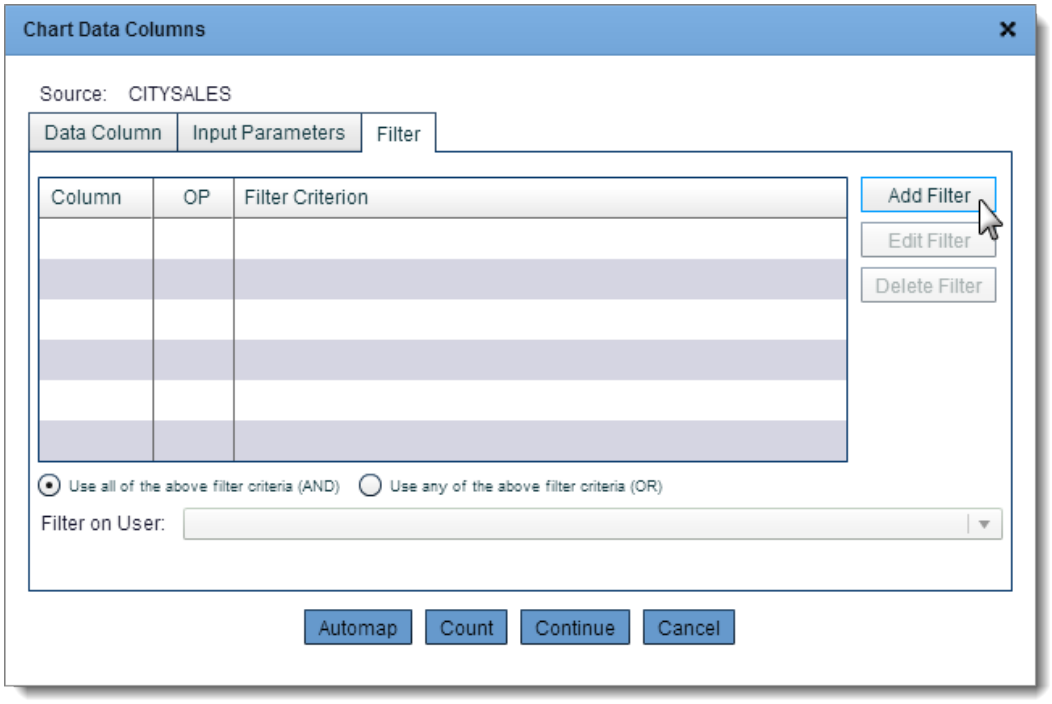


Figure 16-14

5. In the **Specify Filter Criterion** window choose the column you want to apply the filter to (see Figure 16-15).

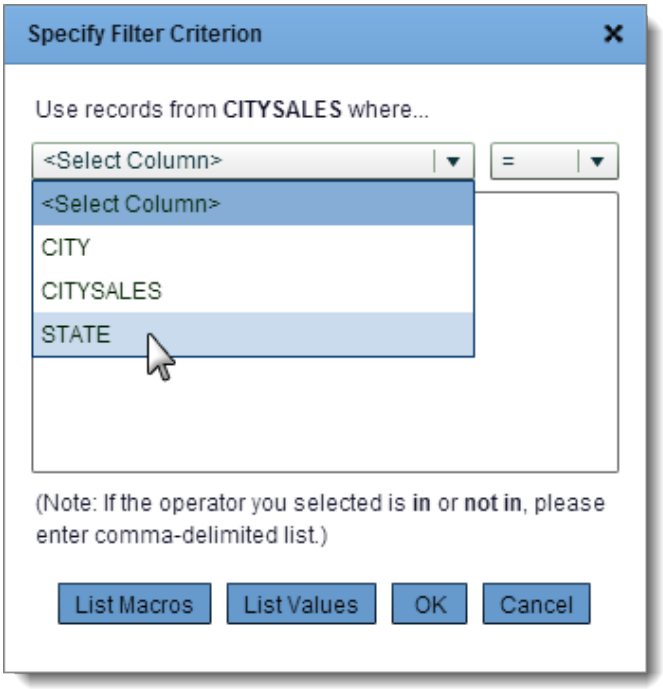


Figure 16-15

6. Make sure the filter operator has the correct option selected (>, <, =, etc.) (see Figure 16-16).

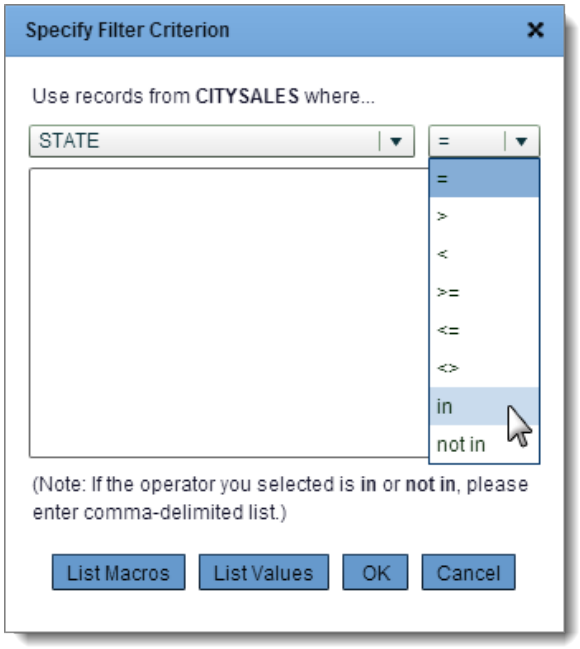


Figure 16-16

7. Either type the filter criteria in the text box provided or click the “List values” button which will display a list of distinct values that exist in the data column you selected for the filter. From this list, you can click on the values you would like to use and they will be added to the text box (see Figure 16-17). Use CTRL + click to select multiple values.

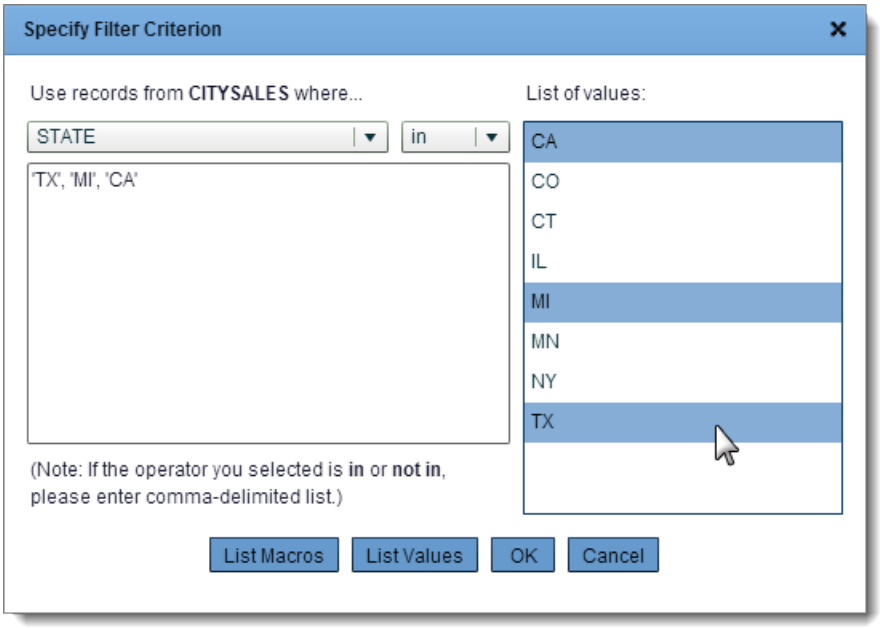


Figure 16-17

8. Finally click the "OK" button to get back to the **Query Builder** window to add more filters as necessary.

16.5 Using Macros

Macros are a feature within iDashboards that allow for dynamic substitution of values. Macros are useful when you would like to indicate a value that changes over time or by context as the criteria for the filter. For example, you want to create a chart that will show you data for a specific period of time relative to today's date and have that date period rolling.

As an example let's work with revenue figures for a 365 day rolling timeframe. The chart should recognize which day it is and update itself with every new day's data (and drop the data for day 365+1) when the next day begins. Figure 16-18 shows how this macro would be entered when creating a macro filter.

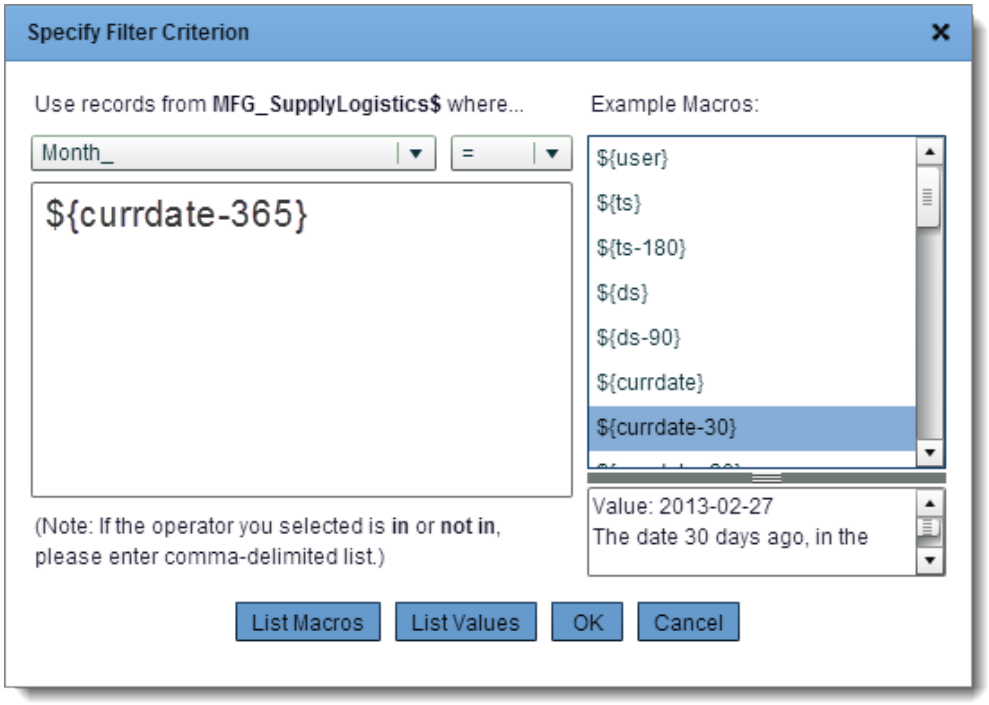


Figure 16-18

All charts within iDashboards simply send a SQL statement to their data source to retrieve the data they will represent. The SQL statement is automatically built based on how you created the chart using the chart creation screens. A date macro is used in the filter to create the WHERE clause of this SQL statement.

The following is a list of available date macros within iDashboards (see Table 20). All values can be modified to alter the length of time they represent. Macros have the form:

```
${keyword:shifter +/- modifier, format}
```

The ‘shifter’ will set the keyword value to a specific point, generally the first or last day of a month or year. The ‘modifier’ is a whole number that can be added or subtracted from the result of the ‘keyword’ or ‘keyword:shifter’ value. The ‘format’ determines how the date or time format will look.

Note: *You may edit the numerical modifier in any macro.*

Date Macros		
${ds} ${ts} ${currdate} ${currdate-30} ${currdate+30} ${currdate+90,"MMMM dd, yyyy"} ${currmonth} ${currmonth-3} ${currmonth+5} ${currmonth, "MM"}	${currmonth, "MMM"} ${currmonth, "MMMM"} ${currmonth + 2, "MMMM"} ${currmonth + 2, "MMMM d, yyyy"} ${currmonth:begin} ${currmonth:end} ${currmonth:end - 2} ${currmonth:begin + 3, "MMMM d, yyyy"} ${currmonth:begin + 3, "MMMM dd, yyyy"}	${curryear} ${curryear-3} ${curryear + 2} ${curryear + 2, "dd MMM yy"} ${curryear:begin} ${curryear:end} ${curryear:begin + 1, "dd MMM yy"}

Table 20

16.5.1 Setting the Proper Date Type and Format

For date macros to work they must be written to work with the *data type* and *format* of the column they will be filtering against within the database (Excel will be considered a database for this discussion). The date macro can filter against data columns that are configured as a number or date/datetime. It is common to filter against columns that are set as a date/datetime. However, various databases treat date/datetime columns differently. If there is a data type or date format conflict between the iDashboards’ filter and the database column you are filtering against, you will receive the following iDashboards error when setting up the filter (see Figure 16-19).

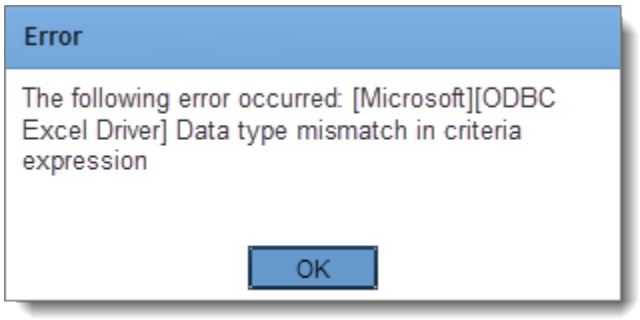


Figure 16-19

Some databases are more forgiving about date formats than others. The remainder of this section illustrates how to use date macros with the three most popular data sources; Excel, SQL Server and Oracle. Examples are provided.

16.5.1.1 Excel

If you are writing a filter to filter against a data column that stores date information as an Excel *date* data type, you need to pay special attention to the format of the date macro in

your filter. By default, Excel stores *date* data types as sequential numbers called serial values. For example, June 1, 2013 is serial value 41275 because it is 41,275 days after January 1, 1900. Excel stores time as using colon separators from 0:00:00 (12:00:00 AM) to 23:59:59 (11:59:59 PM).

If your date data is stored as a *date* data type, you can use one of the 'timestamp' macros, `${ds}` or `${ts}`, or you can use any of the other macros in combination with the Excel "DATEVALUE" function to convert the date macro to the serial value format of Excel. If you are writing a filter to filter against a data column that stores date information as numbers (i.e. "2013" as the year or "15" as the 3pm hour), you can simply treat these values as numbers and use the date macros as they are without modifying the date format.

16.5.1.2 SQL Server

SQL Server is forgiving when it comes to date fields. To filter on a date macro, you may use any of the date macros without concern as to date formatting.

16.5.1.3 Oracle

Oracle is very particular about the format of its date data. If your date data is stored as a *date* data type, you can use one of the 'timestamp' macros, `${ds}` or `${ts}`, or you can use any of the other macros in combination with the Oracle "to_date" function to convert the date macro to the same date format Oracle is using. If you are writing a filter to filter against a data column that stores date information as numbers (i.e. "2013" as the year or "15" as the 3pm hour), you can simply treat these values as numbers and use the date macros as they are without modifying the date format.

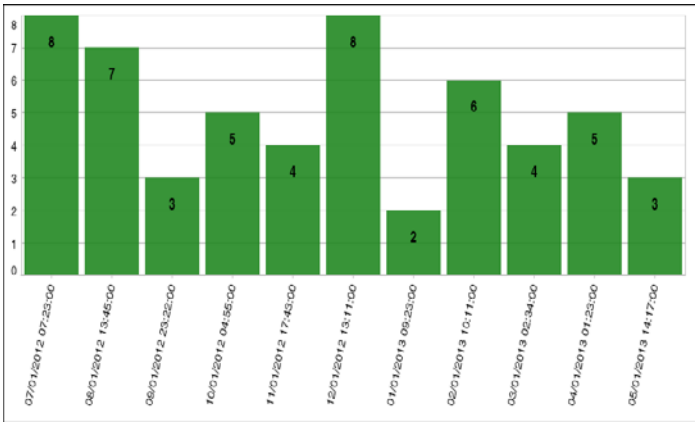
Following are common abbreviations used to format dates in Oracle:

Macro	Result
MM	Numeric month (e.g., 07)
MON	Abbreviated month name (e.g., JUL)
MONTH	Full month name (e.g., JULY)
DD	Day of month (e.g., 24)
DY	Abbreviated name of day (e.g., FRI)
YYYY	4-digit year (e.g., 2013)
YY	Last 2 digits of the year (e.g., 13)
AM/PM	Meridian indicator
HH	Hour of day (1-12)
HH24	Hour of day (0-23)
MI	Minute (0-59)
SS	Second (0-59)

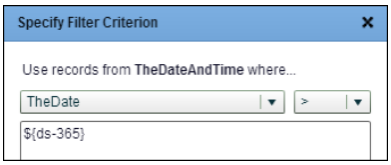
Example 1 - Rolling 12 months, using the ${ds} datestamp macro

Today = 6/09/2013 10:04:34
TheDate is of type Date

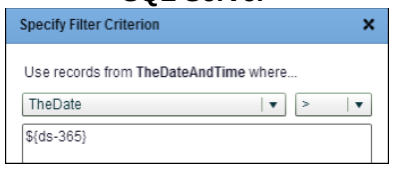
TheDate	Data
4/1/2012 1:23	5
5/1/2012 14:17	3
6/1/2012 20:54	4
7/1/2012 7:23	8
8/1/2012 13:45	7
9/1/2012 23:22	3
10/1/2012 4:55	5
11/1/2012 17:43	4
12/1/2012 13:11	8
1/1/2013 9:23	2
2/1/2013 10:11	6
3/1/2013 2:34	4
4/1/2013 1:23	5
5/1/2013 14:17	3



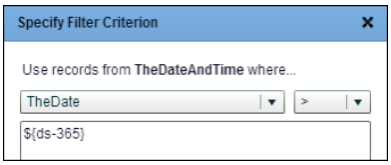
Excel



SQL Server



Oracle

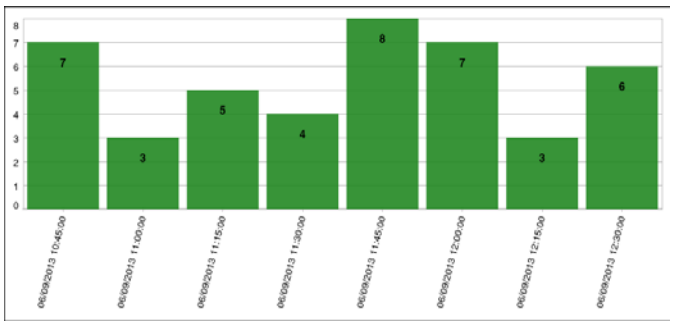


${ds-365} = current date minus 365 days = {d '2012-06-09'}

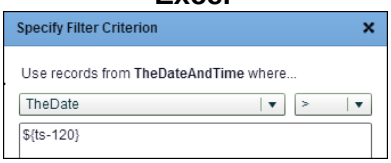
Example 2 - Rolling 120 minutes, using the ${ts} timestamp macro

Today = 6/09/2013 12:36:09
TheDate is of type Date

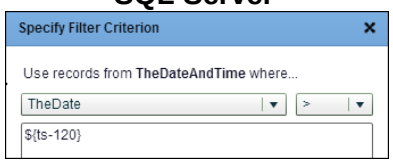
TheDate	Data
6/9/2013 9:45	5
6/9/2013 10:00	3
6/9/2013 10:15	4
6/9/2013 10:30	8
6/9/2013 10:45	7
6/9/2013 11:00	3
6/9/2013 11:15	5
6/9/2013 11:30	4
6/9/2013 11:45	8
6/9/2013 12:00	7
6/9/2013 12:15	3
6/9/2013 12:30	6



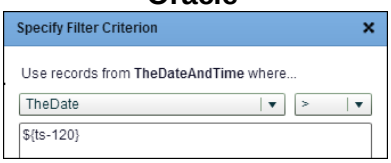
Excel



SQL Server



Oracle

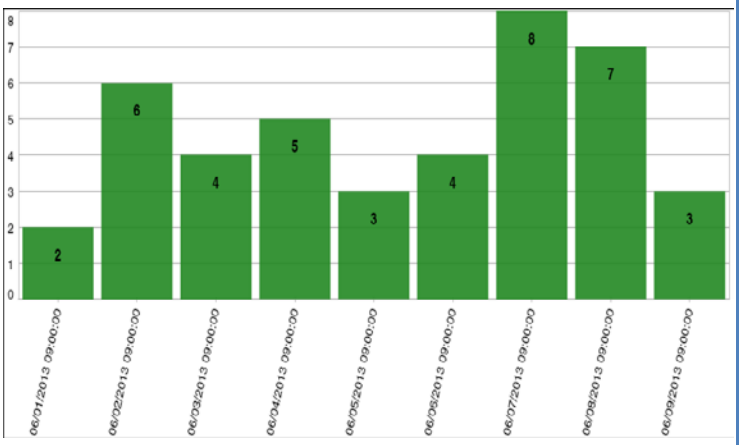


${ts-120} = the current date and time as of 120 minutes ago = {ts '2013-06-09 10:36:09'}

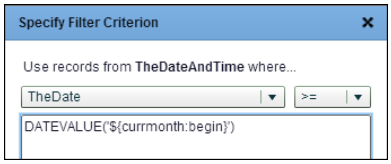
Example 3 - The First Day of the Month Onward, using the `${currmonth:begin}` macro

Today = 6/09/2013 12:43:39
TheDate is of type Date

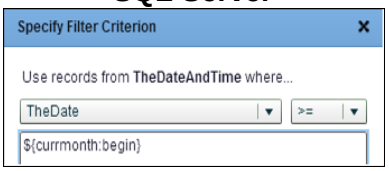
TheDate	Data
5/28/2013 9:00	3
5/29/2013 9:00	4
5/30/2013 9:00	2
6/1/2013 9:00	2
6/2/2013 9:00	6
6/3/2013 9:00	4
6/4/2013 9:00	5
6/5/2013 9:00	3
6/6/2013 9:00	4
6/7/2013 9:00	8
6/8/2013 9:00	7
6/9/2013 9:00	3



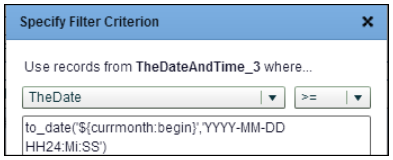
Excel



SQL Server



Oracle

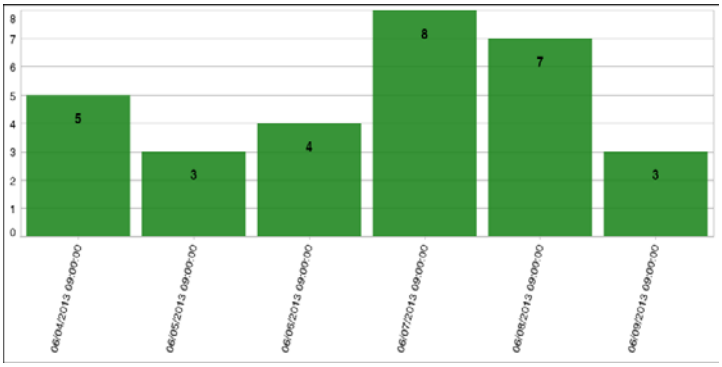


${currmonth:begin} = the first day of the current month = 2013-06-01

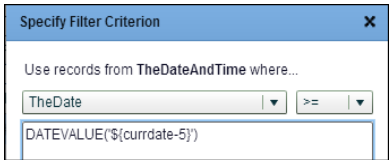
Example 4 - Rolling 5 Days, using the `${currdate}` macro

Today = 6/09/2013 12:43:39
TheDate is of type Date

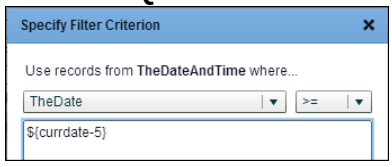
TheDate	Data
5/28/2013 9:00	3
5/29/2013 9:00	4
5/30/2013 9:00	2
6/1/2013 9:00	2
6/2/2013 9:00	6
6/3/2013 9:00	4
6/4/2013 9:00	5
6/5/2013 9:00	3
6/6/2013 9:00	4
6/7/2013 9:00	8
…	…



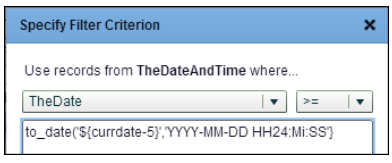
Excel



SQL Server



Oracle

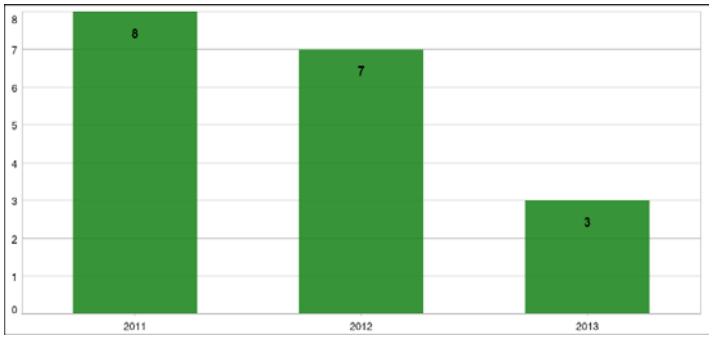


${currdate-5} = the current date minus 5 days = 2013-06-04

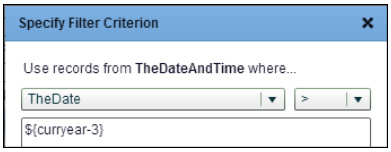
Example 5 - Rolling 3 Years, using the ${curryear} macro

Today = 6/09/2013 12:43:39
TheDate is of type Number

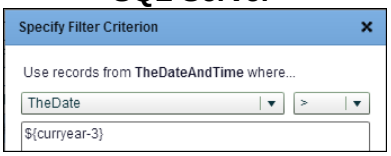
TheDate	Data
2005	4
2006	8
2007	7
2008	3
2009	5
2010	4
2011	8
2012	7
2013	3



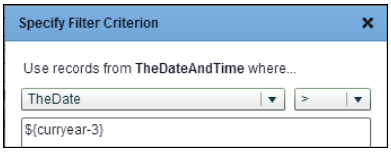
Excel



SQL Server



Oracle

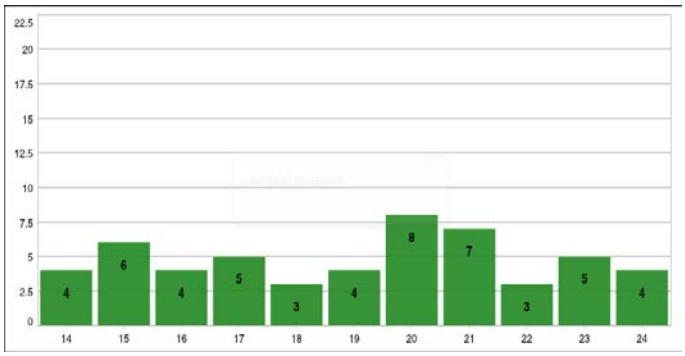


${curryear-3} = the current year minus 3 = 2010

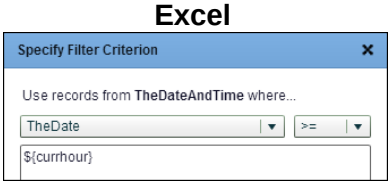
Example 6 - This Hour and Onward, using the ${currhour} macro

Today = 6/09/2013 14:43:39
TheDate is of type Number

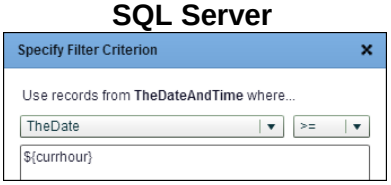
TheDate	Data
1	2
…	…
13	7
14	4
15	6
16	4
17	5
18	3
19	4
20	8
21	7
22	3
23	5
24	4



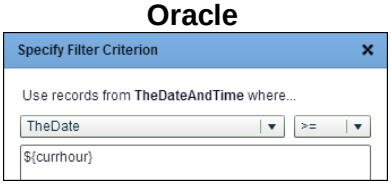
Excel



SQL Server



Oracle



${currhour} = the current hour = 14

16.5.2 Testing the Date Format

iDashboards provides a web page that allows you to test the output of various macros you wish to use. The page is located at:

http://www.yourwebserver.com/idashboards/macrotest.jsp

Replace with actual URL

Simply enter the macro you wish to use, along with any special date formatting, and click 'Expand Macro' (see Figure 16-20 and Figure 16-21).

Macros have the form:

```
${keyword:shifter, format}
```

If "Today" were: June 9, 2013…

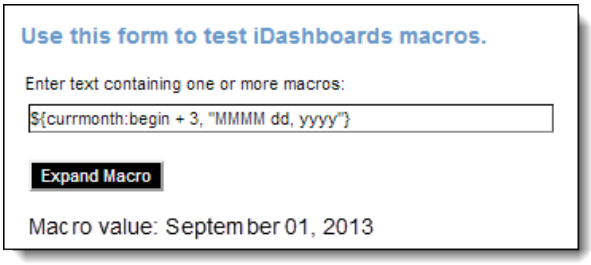

Use this form to test iDashboards macros.
Enter text containing one or more macros:
${currmonth:begin + 3, "MMMM dd, yyyy"}
Expand Macro
Macro value: September 01, 2013

Figure 16-20

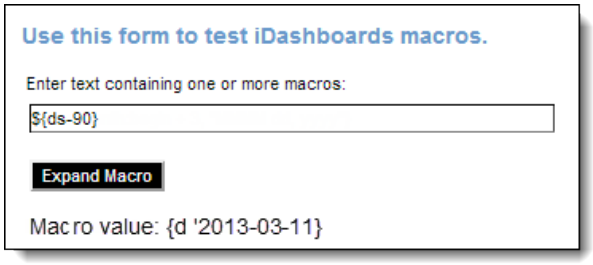

Use this form to test iDashboards macros.
Enter text containing one or more macros:
${ds-90}
Expand Macro
Macro value: {d '2013-03-11}

Figure 16-21

16.5.3 Creating a Macro in a Filter

First, follow steps 1 – 6 in Section 16.4, "Using Filters", then proceed with the following:

- Type the filter criteria in the text box provided or click the "List Macros" button which will display a list of the available macros within iDashboards. From this list, double click on the macro you would like to use and it will be added to the text box (see Figure 16-22).
- If necessary, modify the macro by changing any numerical values and/or adding any date format modifiers.

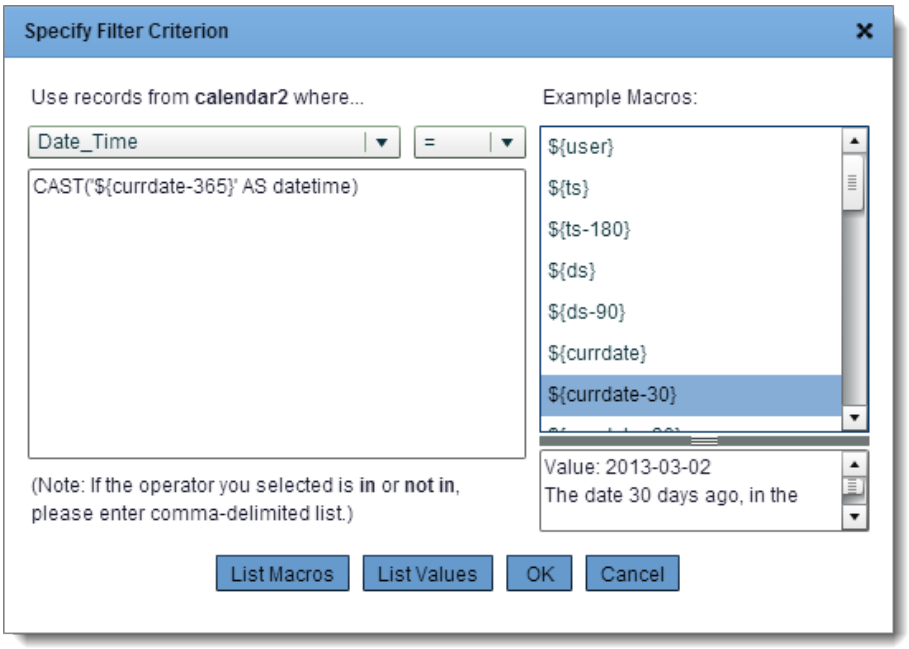


Figure 16-22

- Click the “OK” button, then the “Continue” button in the **Query Builder** window to accept the new macro filter.

16.6 Adding Macros to Chart Titles

You can add any of the macros from the previous section to a chart title, enabling that chart title to display dynamic content. For example, to create a chart with today’s date displayed as part of the title, `${currdate}` could be added to the chart title. Every time you open or refresh the chart, the current date will be displayed (see Figure 16-23). `${value:<Axis Name>}` is a macro that will return the value of the axis named “<Axis Name>”. The axis name is case sensitive.

Charts with macros in their title must NOT be allowed to be over-written by individual users. Also, when saving a chart with a macro in the title, the chart should only be saved in ‘Save As’ mode. If the chart with a macro in the title is saved in ‘Save’ mode then the interpreted value of the macro will overwrite the Macro string (i.e. “2013-09-12”) will be saved in the title versus `${currdate}`.

Note: *Macros DO NOT work within the chart Name or Description fields.*

Note: *See Section 12.2, “Drilldown Parameters” for detailed information on passing parameters during drilldowns.*

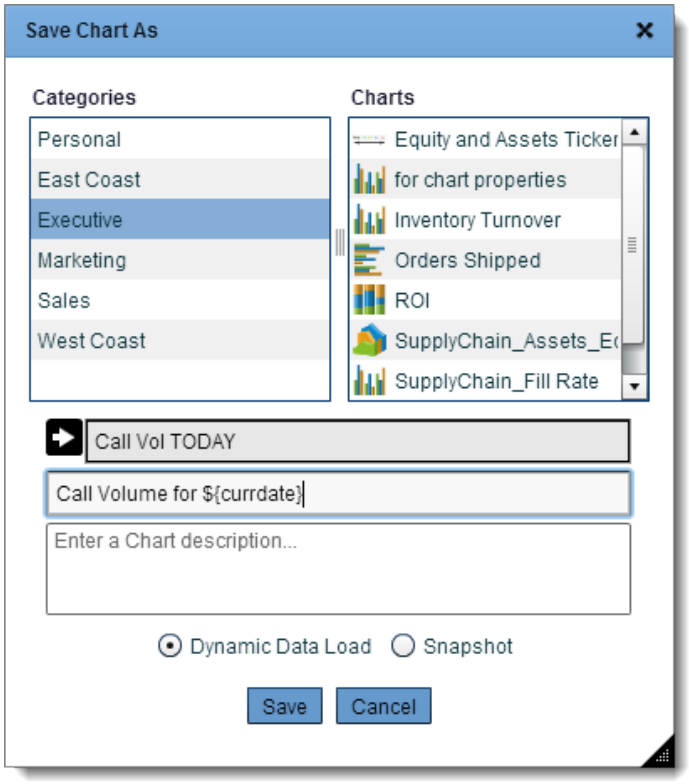


Figure 16-23

16.7 Filter on User

On the 'Filter' tab on the **Chart Data Columns** screen, there is a dropdown box for "Filter on User" (see Figure 16-24). The Filter-on-User functionality allows multiple users to view the same dashboard but the data they see will be pre-filtered to only show data for their logged in username. For example, two Regional Managers can log on to iDashboards and view the same "Sales" dashboard, but manager A will only see data for his territory and manager B will only see data for her territory.

The majority of the Filter-on-User functionality is configured in the iDashboards Administrator Application and the iDashboards Repository itself. This setup requires administrative permissions and is described in the iDashboards Administrator's Manual. Setup needs to happen by an iDashboards Administrator before it can be applied to chart configuration.

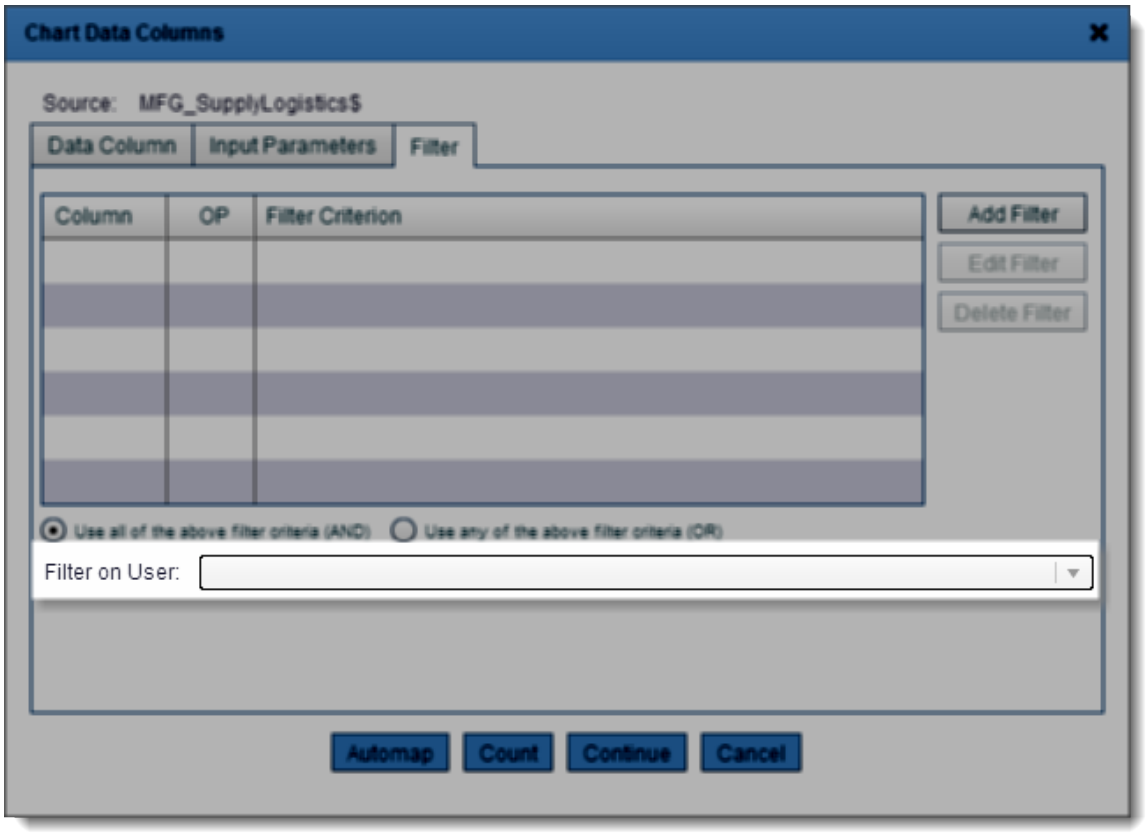


Chart Data Columns
Source: MFG_SupplyLogistics$
Data Column
Input Parameters
Filter
Column
OP
Filter Criterion
Add Filter
Edit Filter
Delete Filter
Use all of the above filter criteria (AND)
Use any of the above filter criteria (OR)
Filter on User:
Automap
Count
Continue
Cancel

Figure 16-24

17. Input Parameters

Input Parameters provide the ability to create charts and dashboards whose displayed data is dependent on Input Parameter values provided by the user. The input values are used by charts and dashboards in a variety of ways, including:

- Filtering chart data based on the input values
- Displaying the input values in chart titles
- Using the input values in a chart's custom SQL queries
- Using the input values as parameters for stored procedures
- Passing the input values down during drilldowns

Input Parameters can be defined at both the chart and dashboard level. Chart Input Parameters only affect their associated chart. Dashboard Input Parameters can affect every chart contained in the associated dashboard. Dashboard Input Parameters effectively pass their values down to the Chart Input Parameters of the charts within the dashboard. This is further explained in Section 17.2.1, "Passing Dashboard Input Parameters to Chart Input Parameters".

You can define multiple Input Parameters for any chart or dashboard.

Note: *Input Parameters are only available for charts that use dynamic data, not static data.*

17.1 Parameter Definitions

Input Parameters are defined using the following attributes:

- Parameter Name – This is the name to be used internally in the chart or dashboard definition to identify the parameter. For example, when you add parameters to a chart filter or chart title, you use this name. It can consist of 1 to 20 letters, digits or underscores, and must begin with a letter. Blank spaces are not allowed.
- Parameter Label – This is the label displayed to iDashboards when the user supplies parameter values. For example, when a user is prompted to enter a value for an Input Parameter, this is the parameter label that will be displayed. Therefore, the label should be user-friendly and formatted nicely. It can contain up to 50 printable characters without leading or trailing whitespaces.
- Data Type – This can be one of the three standard iDashboards data types; String, Number or Datetime.
- Control Type – This is the type of input selector that will be presented to the user. The available types are Text Box, Dropdown List, Slider, Spinner and Slider/Spinner.

- Required Flag – This indicates whether or not a value is required for the Input Parameter before the chart or dashboard is displayed. If it is required, and a value is not present via a drilldown or initial value, the use is prompted to enter a value.

- Replace blank with (optional, charts only) – If a user submits an Input Parameter with a blank value (i.e. they don't enter a value but still submit), the value in the 'Replace blank with' field will be used instead. See Section 17.12, "Blank Parameter Values" for further details.

- Initial Value (optional) – This is the value that will be used for the Input Parameter if no other value is present.

> ***Note:*** *When a picklist is used with an input parameter, the user can identify the 'Initial Value'. The value entered must come from the 'Value' data column and not the 'Display' data column. See Section 18.2.4, "*Data Column*" for more information on picklist values.*

17.2 Configuring Input Parameters

Input Parameters can be configured for both dashboards and charts. Chart Parameters are configured when specifying the chart data; either when identifying the data source columns or defining a custom query. More specifically, Chart Input Parameters can be configured when you first create a chart or when you edit a chart by right-clicking and selecting the Chat Data option (see Figure 17-1, Figure 17-2 and Figure 17-3).

Dashboard Parameters are defined in a similar manner to Chart Parameters. They are accessed by selecting "Menu" and choosing 'Define Dashboard Parameters…' or by right-clicking on the dashboard frame and selecting the same menu item.

Note: *See Chapter 7, "*Creating Charts: Dynamic Data*" for information on the difference between charts built on Data Source Columns and Custom Queries.*

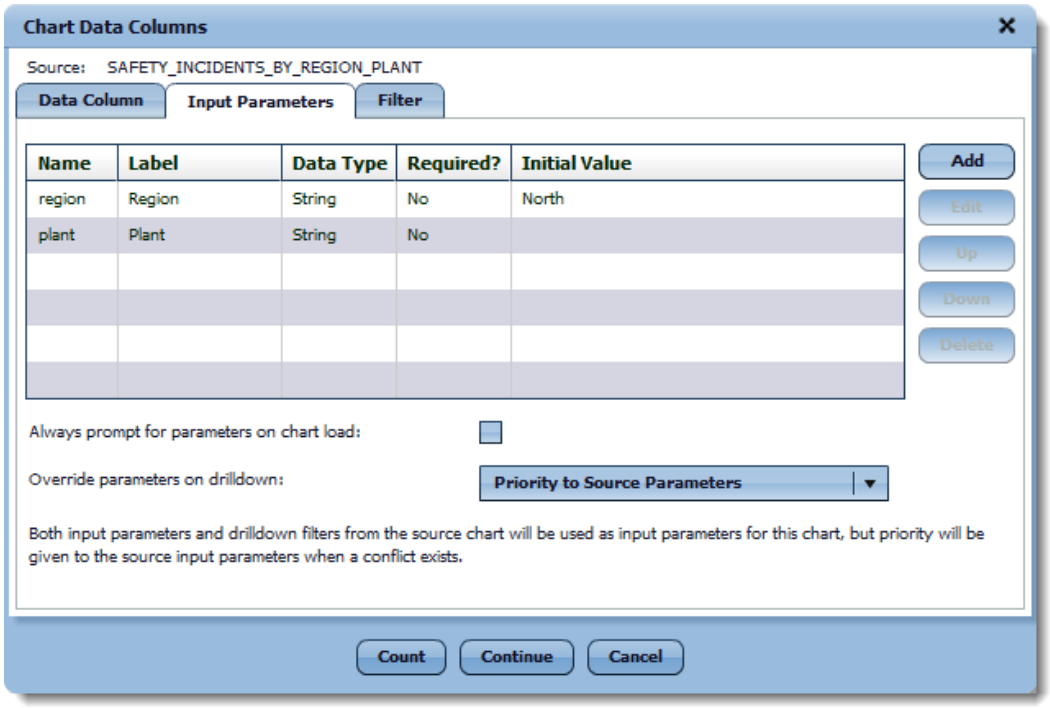


Figure 17-1 (Chart built on Data Source Columns)

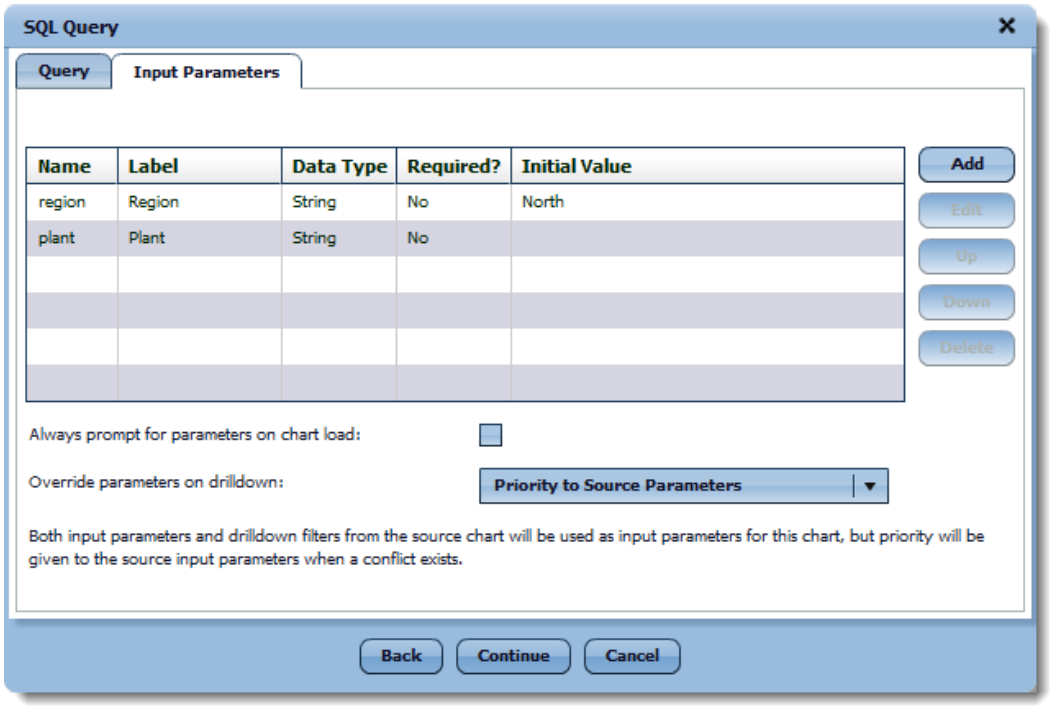


Figure 17-2 (Chart built on Custom Queries)

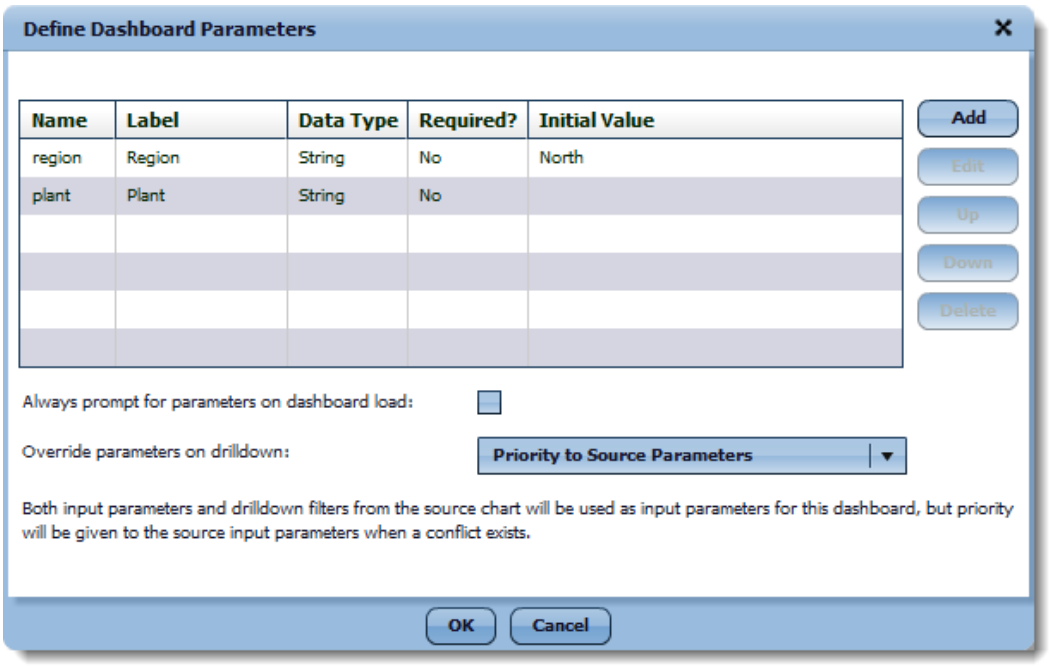


Figure 17-3 (Dashboard)

Each Input Parameter definition will be displayed as a row in the window. You can order the Input Parameters by highlighting one and clicking the 'Up' or 'Down' buttons. The order is for display purposes only. It does not affect chart/dashboard behavior.

For Chart Input Parameters, if you select "Always prompt for parameters on chart load", every time the chart is loaded, it will prompt the user to enter values for Input Parameters, regardless of whether the individual Input Parameters are required or not. For Dashboard Input Parameters, "Always prompt for parameters on dashboard load" works the same way.

The "Override parameters on drilldown" functionality will be described later in this chapter.

To configure a new Input Parameter for a chart or dashboard, click the 'Add' button. To edit an existing Input Parameter, select the Input Parameter and click 'Edit'. This will open the **Parameter Definition** window (see Figure 17-4).

Note: *When defining Input Parameters for a dashboard, the* ***Parameter Definition*** *window will not contain the 'Replace blank with' field. The 'Replace blank with' field only pertains to Chart Input Parameters, and only in certain circumstances. See Section 17.12, "*Blank Parameter Values*" for more details.*

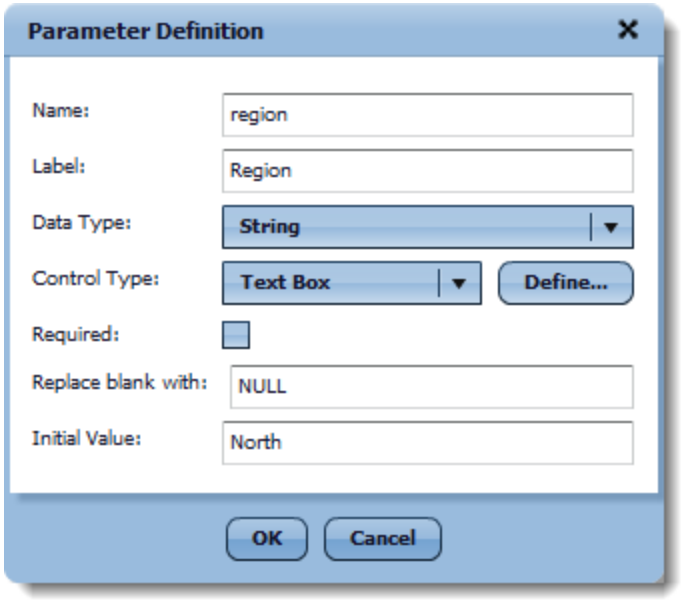


Figure 17-4

The required attributes are 'Name', 'Label', 'Data Type', 'Control Type' and 'Required'. 'Replace blank with' and 'Initial Value' are optional. Refer to the descriptions of these attributes earlier in this chapter. The Control Type attribute is described in section 17.2.2, "Control Types".

17.2.1 Passing Dashboard Input Parameters to Chart Input Parameters

As stated earlier, the only real purpose of Dashboard Input Parameters is to pass their values down to the Chart Input Parameters of the charts within the dashboard. To configure a Dashboard Input Parameter that will be passed to the charts within the dashboard, the name and data type of the Dashboard Input Parameter must match the name and data type of a Chart Input Parameter. All matching Input Parameters will be passed from the dashboard to its charts, while non-matching Input Parameters have no impact on the values of the Chart Input Parameters.

17.2.2 Control Types

The available Control Types depend on the Data Type selected. If "String" is selected, then the available Control Types are Text Box and Dropdown List. If "Number" or "Datetime" are selected, then the available Control Types are Text Box, Dropdown List, Slider and Spinner. Additionally, the combination Slider/Spinner control is also available for the Number type.

17.2.2.1 Text Box

Used for data type String, Number or Datetime, a Text Box allows a user to key in a value (see Figure 17-5).

Figure 17-5

The **Parameter Value Definition** window (see Figure 17-6), accessed by clicking “Define” on the **Parameter Definition** window, allows you to set a maximum length for the input text as well as to turn on ‘Refresh On Change’. If ‘Refresh on Change’ is selected, the ‘Update’ button will be removed from the chart and the update action will trigger when a user enters a value and hits Enter while in the Text Box or when the Text Box loses focus.

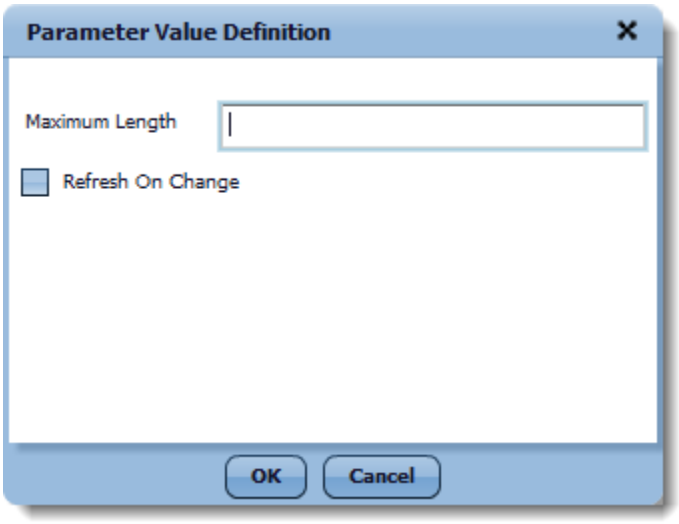


Figure 17-6

17.2.2.2 Dropdown List

Used for data type String, Number or Datetime, a Dropdown List allows a user to select from a predefined list of available values (see Figure 17-7).

Figure 17-7

The **Parameter Value Definition** window (see Figure 17-8), accessed by clicking "Define" on the **Parameter Definition** window, allows you to create a predefined list of values that will show up in the dropdown list. If 'Refresh on Change' is selected, the 'Update' button will be removed from the chart and the update action will trigger when the user selects one of the predefined values. If 'Editable?' is selected, the Dropdown List will also take on the characteristics of the Text Box control type.

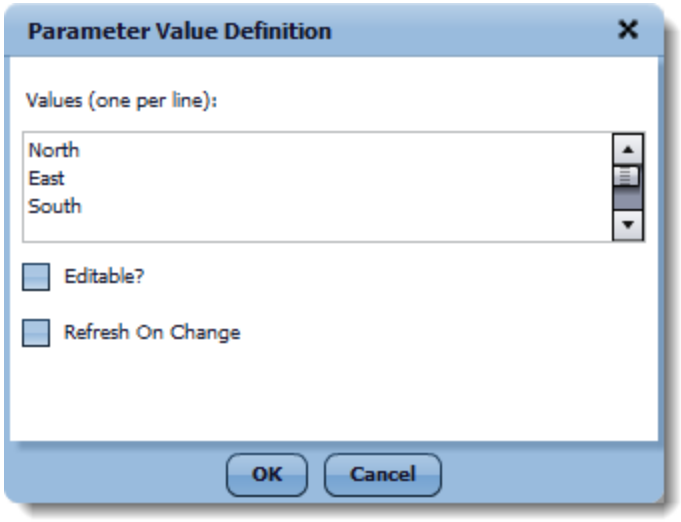


Figure 17-8

17.2.2.3 Slider

Used for data type Number or Datetime, a Slider allows a user to move a slider through a set of predefined values and select a particular value in between (see Figure 17-9).

Figure 17-9

The **Parameter Value Definition** window (see Figure 17-10 and Figure 17-11), accessed by clicking “Define” on the **Parameter Definition** window, allows you to define the values that will be available along the Slider bar. For Number, you do this by setting the Minimum, Maximum and Increment values. For Datetime, you do this by setting the Beginning Date, Ending Date and Day Increment. If ‘Refresh on Change’ is selected, the ‘Update’ button will be removed from the chart and the update action will trigger when the user moves and releases the slider.

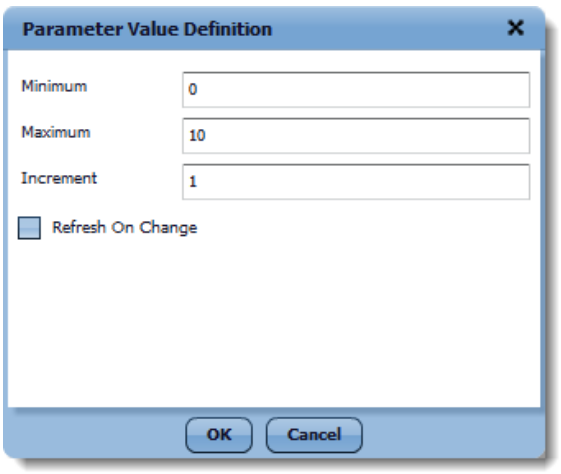


Figure 17-10

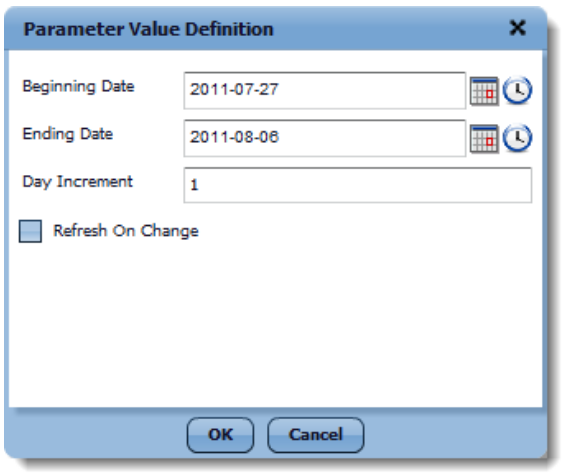


Figure 17-11

17.2.2.4 Spinner

Used for data type Number or Datetime, a Spinner allows a user to select from a set of predefined values by clicking up or down arrows (see Figure 17-12).

Figure 17-12

The **Parameter Value Definition** window (see Figure 17-13 and Figure 17-14), accessed by clicking "Define" on the **Parameter Definition** window, allows you to define the values that will be available in the Spinner. For Number, you do this by setting the Minimum, Maximum and Increment values. For Datetime, you do this by setting the Beginning Date, Ending Date and Day Increment. If 'Refresh on Change' is selected, the 'Update' button will be removed from the chart and the update action will trigger when the user clicks an arrow to increment or decrement the value.

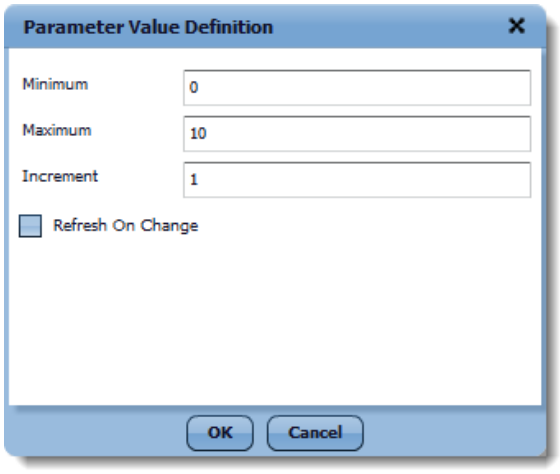


Figure 17-13

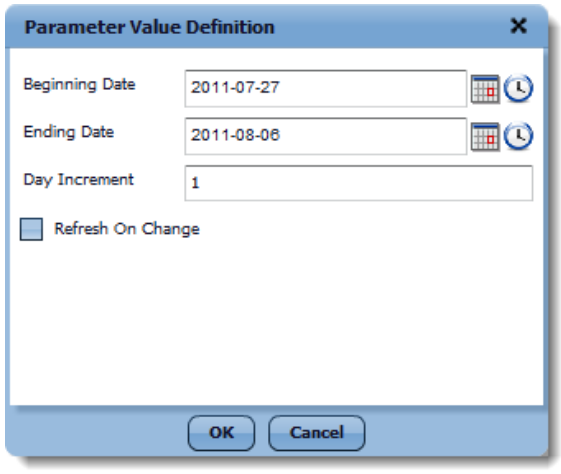


Figure 17-14

17.2.2.5 Spinner/Slider

Used for data type Number, a Spinner/Slider combines the functionality of the Spinner and Slider (see Figure 17-15).

Figure 17-15

The **Parameter Value Definition** window (see Figure 17-16), accessed by clicking “Define” on the **Parameter Definition** window, allows you to define the values that will be available in the Spinner/Slider by setting the Minimum, Maximum and Increment values. If ‘Refresh on Change’ is selected, the ‘Update’ button will be removed from the chart and the update action will trigger when the user selects one of the predefined values in the Slider or clicks an arrow to select one of the predefined values in the Spinner.

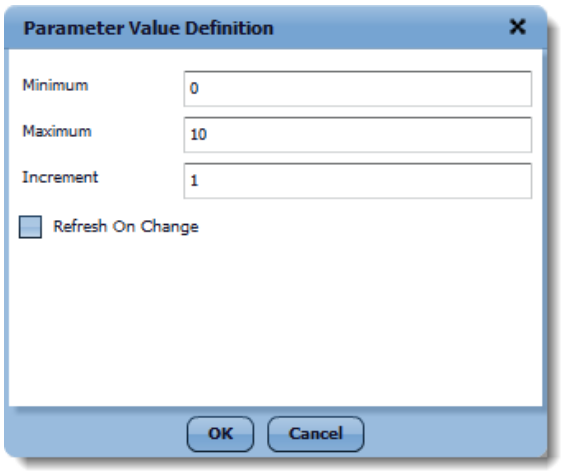


Figure 17-16

17.3 Working with Input Parameter Values

When a user enters a value for an Input Parameter, that value is stored by iDashboards and can be used in a number of ways (see beginning of chapter for a list). To use an Input Parameter value, you will make use of the "param" macro.

17.3.1 The PARAM Macro

The Input Parameter macro takes the following format:

```
${param:<Parameter Name>}
```

Note: *Parameter macros used within a chart filter can be referenced using one of two options. Either the parameter macro can be typed in using the keyboard, or the 'List Macro' button can be select (when defining the filter) and the input parameter can be selected from the list.*

For example, if you want to use the value of the Input Parameter named "region" from Figure 17-4, the macro would look like:

```
${param:region}
```

Any legitimate place you use this macro, the macro will be replaced by the current value of the "region" Input Parameter.

17.4 Date Selection Control

Input parameters that use the datetime control type can leverage the date and time selection windows to define initial values (see Figure 17-17). The date icon allows the user to select a short date (yyyy-MM-dd). The time selection component allows the user to additionally select a time portion for their datetime value. Date macros are also supported as an initial value. See Section 16.5, "Using Macros" for information on using date macros.

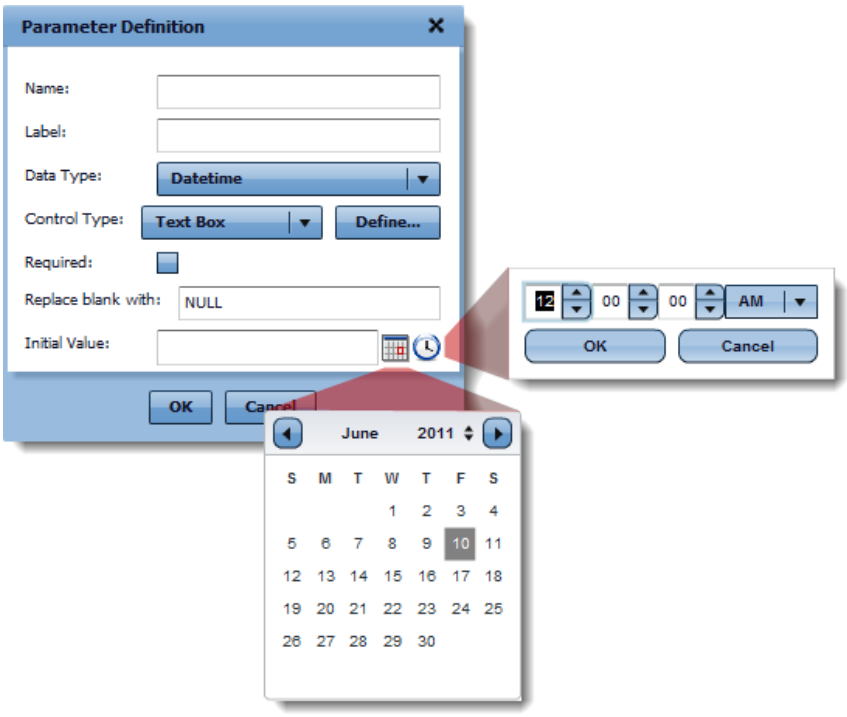


Figure 17-17

Note: The Administrative Application specifies whether or not military time format is displayed. The default value for this setting is 'true', indicating the time selection will display the time in military format.

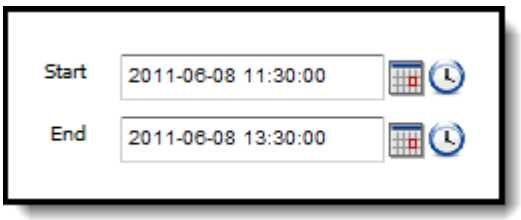


Figure 17-18

17.5 Filtering Data with Input Parameters

One of the primary uses of Input Parameters is to filter data displayed in charts. Note that we did not say "charts and dashboards." This is because there is no data to filter within a dashboard, only the charts that make up the dashboard have data to filter. Therefore, this section pertains specifically to Chart Input Parameters. Recall that Dashboard Input Parameters are passed down to Chart Input Parameters.

The filtering process works as follows. Every time a chart receives an Input Parameter value (either via user input, drilldown or an initial value), the chart refreshes, filtering its data based on the value. Every time this happens, the chart performs a new query against its data source, using the parameter value as a filter. The data returned to the chart is a result of the filtered query.

To set up this filter functionality, you need to add the Input Parameter as a filter on the chart. You do this by creating a chart filter and using the PARAM macro as its value.

Note: *See Section 16.4, "*Using Filters*" for a complete description of Chart Filters.*

For example, let's say you want to create the "Safety Incidents" chart from Figure 17-5 that will accept 'Region' as an Input Parameter and filter the chart data based on the region entered. First, create an Input Parameter named "region" as shown in Figure 17-4. Then, on the same chart, go to the Filter tab and add the filter shown in Figure 17-19. Either type the parameter macro, or select the input parameter from the Macro list.

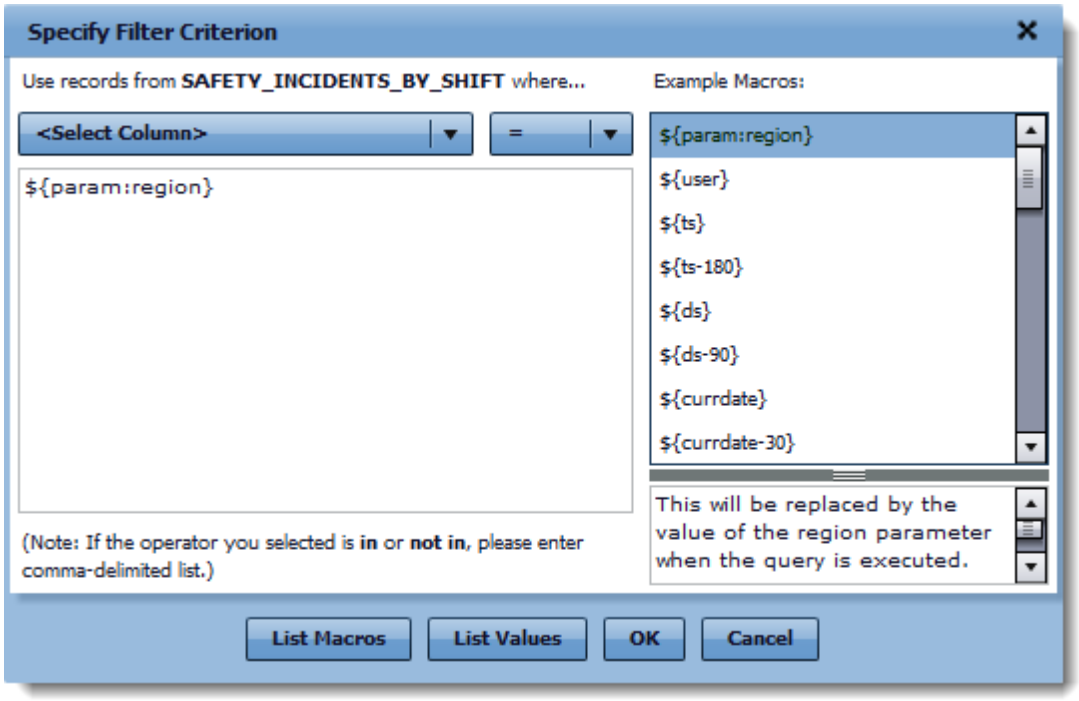


Figure 17-19

With the Input Parameter and Filter set up and saved, every time a user enters an Input Parameter value into the chart, the chart will take that value and pass it to the chart filter through the PARAM macro. The value will then be used as a filter criterion when the chart queries its data source, therefore only displaying data filtered for the Input Parameter value.

Since Input Parameters and Chart Filters are two distinct features of iDashboards, there is no way to validate that an Input Parameter value entered by a user will be a valid filter for that chart. Therefore, it may be possible for a user to submit an Input Parameter value that will result in a chart with no data, as shown in Figure 17-20.

Figure 17-20

It is very important to make sure that when a chart is first loaded, it has a parameter value for every Input Parameter it uses for filtering. Otherwise, the chart may return no data. You can force an Input Parameter value in any of the following three ways:

1. Create an initial value for the Input Parameter.
2. Check the Required Flag for the Input Parameter.
3. Check the “Always prompt for parameters on dashboard load:” option on the Input Parameters tab.

17.6 Displaying Input Parameters in Chart Titles

Input Parameter values can be displayed in a chart title by adding the PARAM macro to the chart title. For example, if a chart has an Input Parameter as shown in Figure 17-21 and was given a title as shown in Figure 17-22, when the Input Parameter value “West” is submitted in the chart, the chart title would look like it does in Figure 17-23.

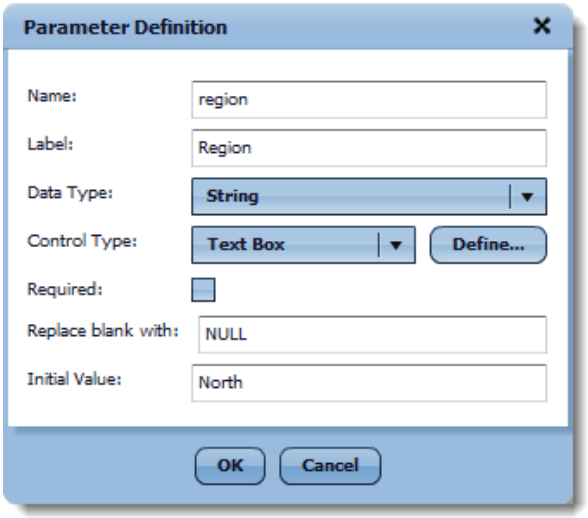


Figure 17-21

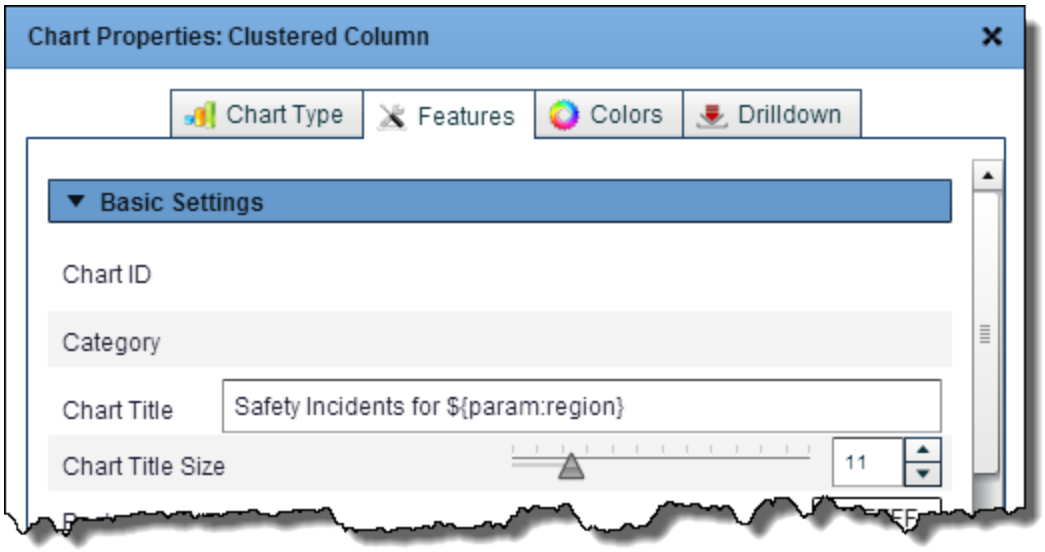


Figure 17-22

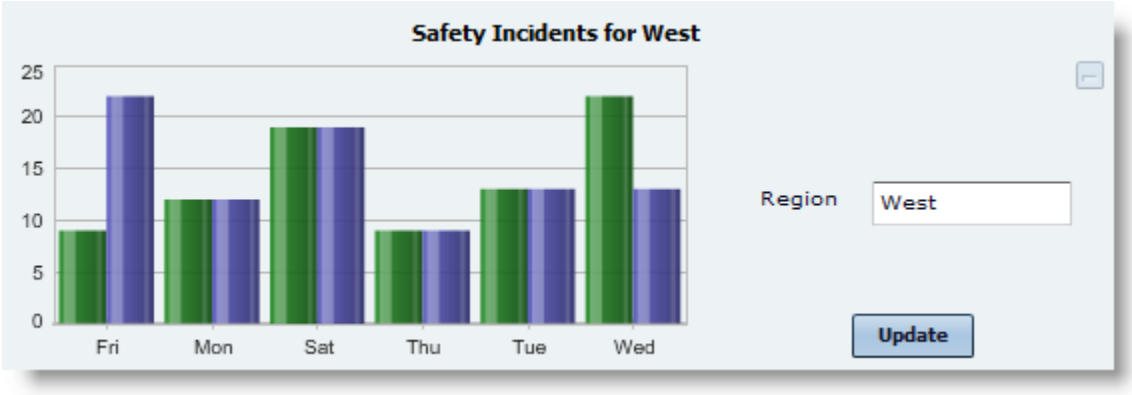


Figure 17-23

17.7 Using Input Parameters in Custom Queries

Input Parameters can be used in Custom Queries by adding the PARAM macro to the query. See Section 7.6, "Custom Query" for a description of Custom Queries.

For example, if you create a chart with Input Parameters as shown in Figure 17-24, you could create a Custom Query as shown in Figure 17-25 to filter data in the chart based on the Input Parameter values.

Note: *An Input Parameter's 'Replace blank with' value will not replace the PARAM macro when used in a chart title. See Section 17.12, "*Blank Parameter Values*" for more information on the 'Replace blank with' field.*

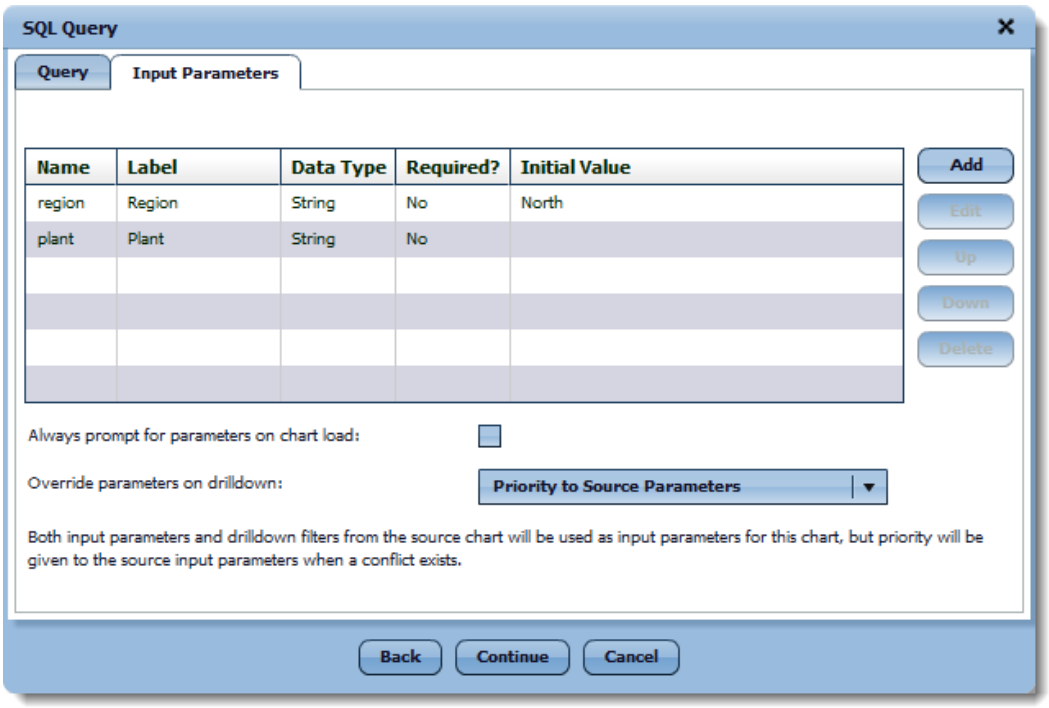


Figure 17-24

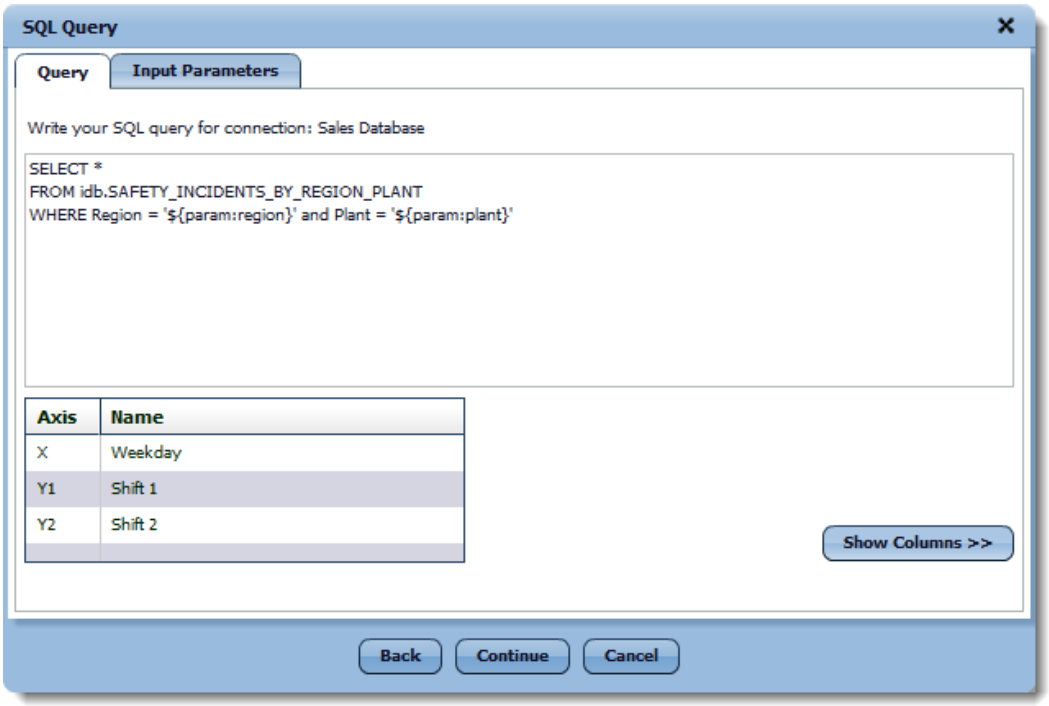


Figure 17-25

17.8 Using Input Parameters in Stored Procedures

Input Parameter values can be used as stored procedure values when a chart uses a stored procedure as its data source. You do this by adding the PARAM macro as the stored

procedure value when setting up the stored procedure arguments. See Section 7.7, "Stored Procedures as a Data Source" for a description of using stored procedures as data sources.

For example, if a chart has an Input Parameter as shown in Figure 17-26 and a stored procedure argument set up as shown in Figure 17-27, then the Input Parameter value submitted by the user would be used as the stored procedure argument.

Note: *Since an Input Parameter's 'Replace blank with' value cannot be used as a stored procedure input, this field is absent from the* ***Parameter Definition*** *window when creating Input Parameters for charts using a stored procedure as a data source. See Section 17.12,* "Blank Parameter Values" *for more information on the 'Replace blank with' field.*

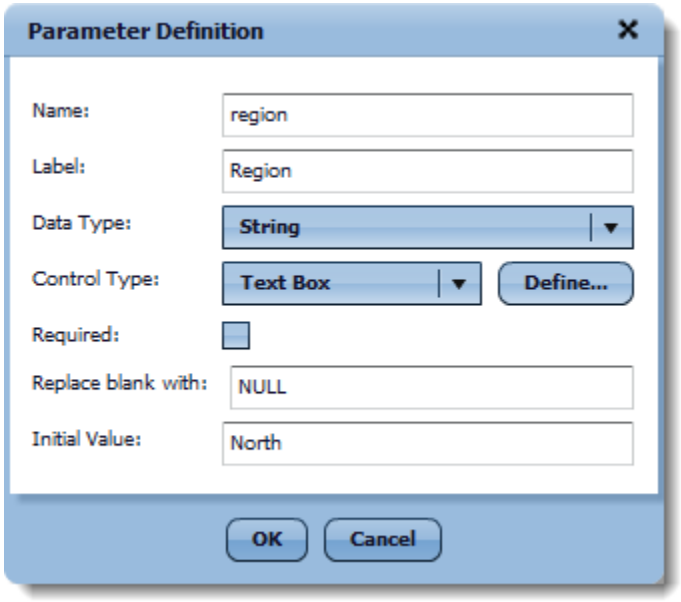


Figure 17-26

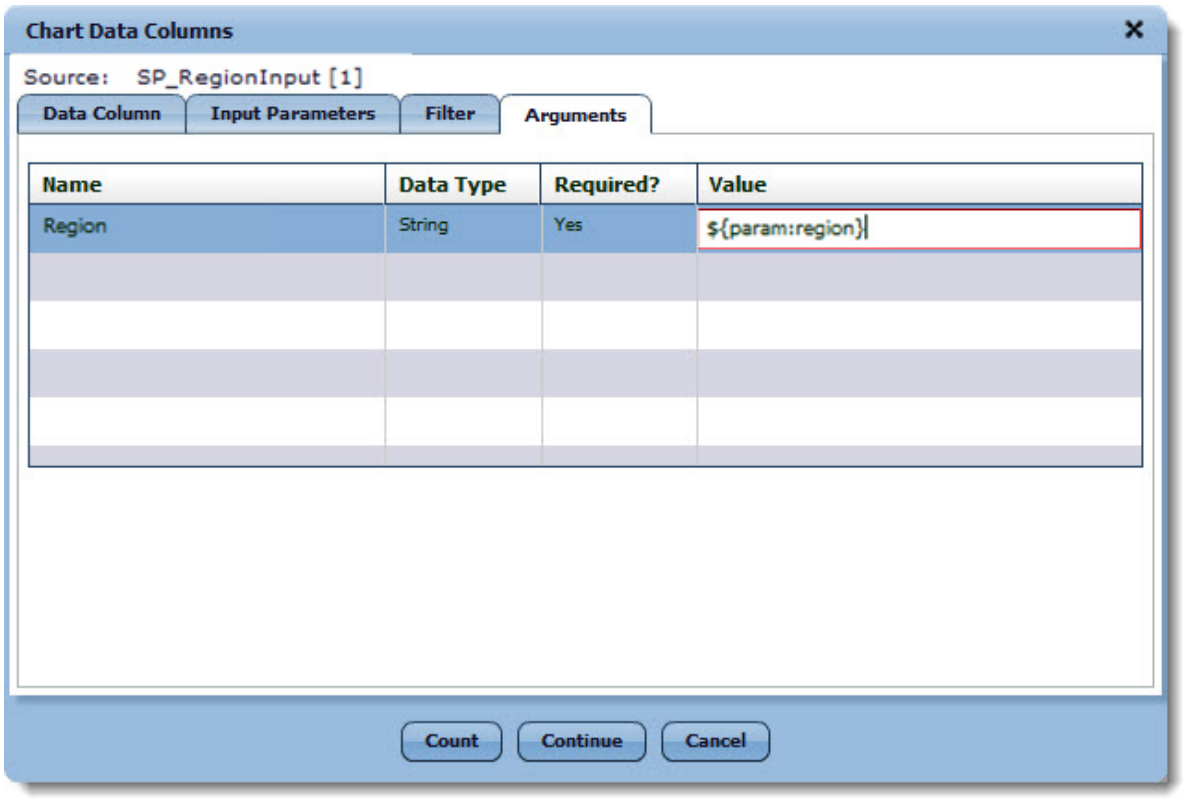


Figure 17-27

17.9 Passing Input Parameters through Drilldowns

Input Parameters can be passed through a drilldown just as standard Drilldown Filters can. If you are unfamiliar with the iDashboards drilldown functionality, read Chapter 12, “Chart Properties: Drilldowns” before reading this section. The chart that is clicked on to initiate a drilldown is called the “source chart” and the chart that accepts the drilldown is called the “target chart.” In the case that a source chart drills down to a dashboard, all charts within that dashboard act as target charts.

17.9.1 Sending Input Parameters through a Drilldown

The default behavior of a source chart is to pass its Input Parameters when a drilldown is initiated (when it is clicked on). You can disable this default behavior by un-checking the “Send Input Parameters to Target Chart” checkbox on the chart’s ‘Drilldown’ property tab (see Figure 17-28).

Again, similar to standard Drilldown Filters, Input Parameters accumulate and are stored by iDashboards over multiple drilldown levels. For more information on this functionality, see Section 12.2, “Drilldown Parameters”

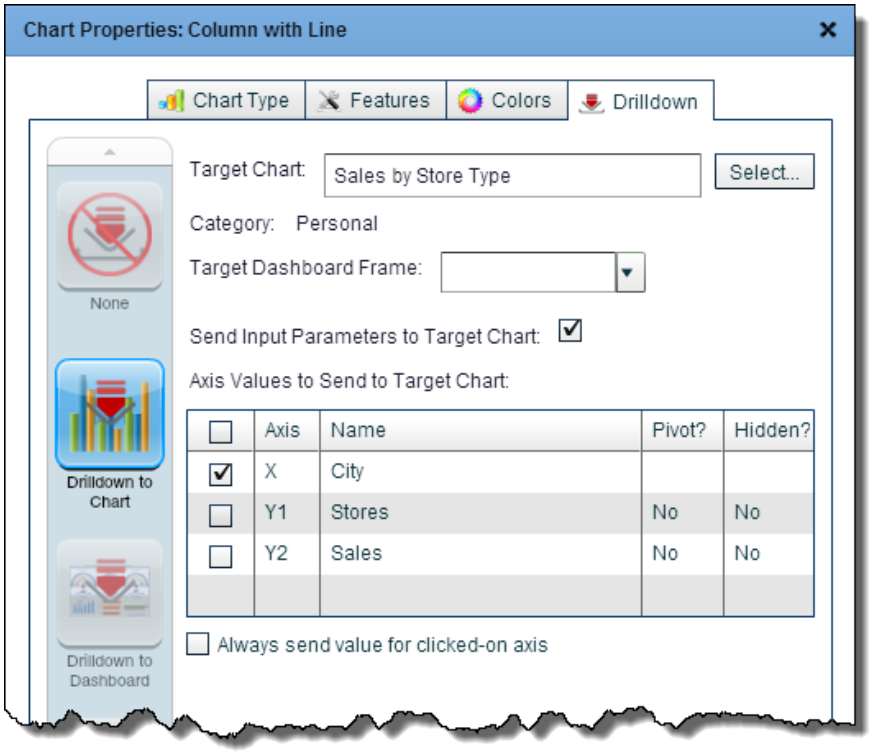


Figure 17-28

17.9.2 Getting Input Parameters through a Drilldown

The target chart of a drilldown can accept any combination of the Drilldown Filters and Input Parameters from a source chart. You are able to control this via the "Override parameters on drilldown:" dropdown box on the 'Input Parameters' tab of a target chart (see Figure 17-29). The five options are as follows:

- Priority to Source Parameters - Both Input Parameters and Drilldown Filters from the source chart will be used as Input Parameters for this chart, but priority will be given to the source Input Parameters if a conflict exists.
- Priority to Drilldown Filters - Both Input Parameters and Drilldown Filters from the source chart will be used as Input Parameters for this chart, but priority will be given to the Drilldown Filters if a conflict exists.
- Only Source Parameters - Only Input Parameters from the source chart will be used as Input Parameters for this chart and Drilldown Filters from the source chart will be ignored.
- Only Drilldown Filters - Only Drilldown Filters from the source chart will be used as Input Parameters for this chart and Input Parameters from the source chart will be ignored.
- Neither Parameters nor Drilldown Filters - Neither the Drilldown Filters or Input Parameters from the source chart will be used as Input Parameters for this chart.

The following examples show the behavior of a target chart with each of the five “Override parameters on drilldown” options selected. The Input Parameters of the target chart has been set up as shown in Figure 17-29. Note that both Input Parameters are required and don’t have initial values. Therefore, if either Input Parameter does not acquire a value from the drilldown, the user will be prompted to enter one.

The source chart has been set up as shown in the following three figures. The chart Data Columns are shown in Figure 17-30, the chart Input Parameters are shown in Figure 17-31 and the chart is displayed in Figure 17-32.

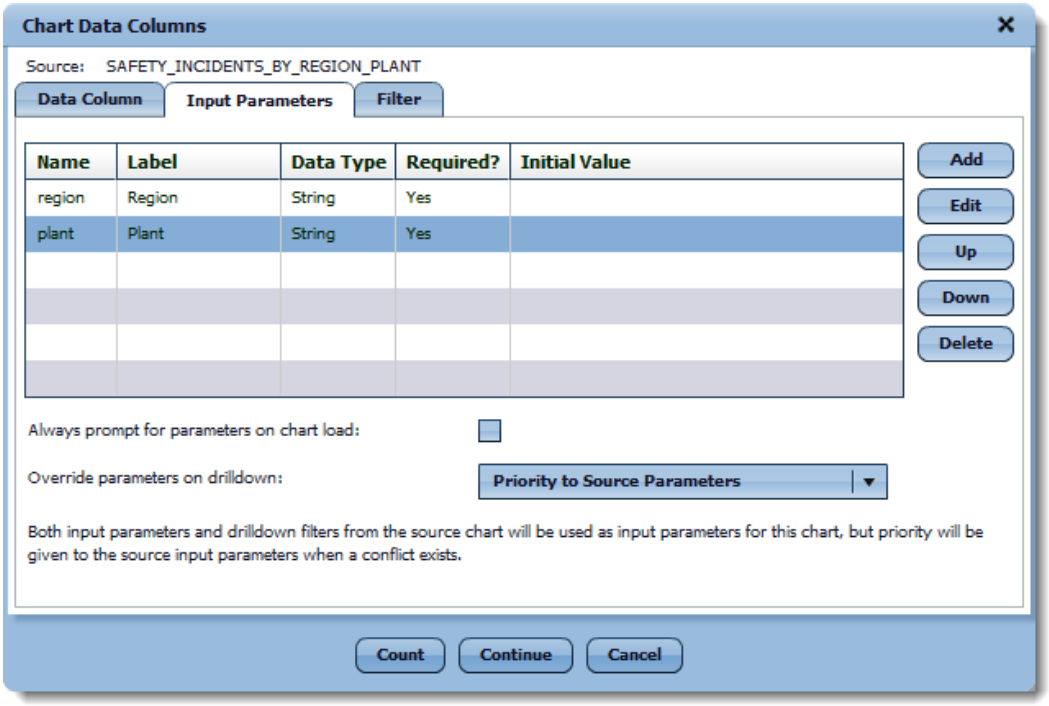


Figure 17-29 (target chart Input Parameters)

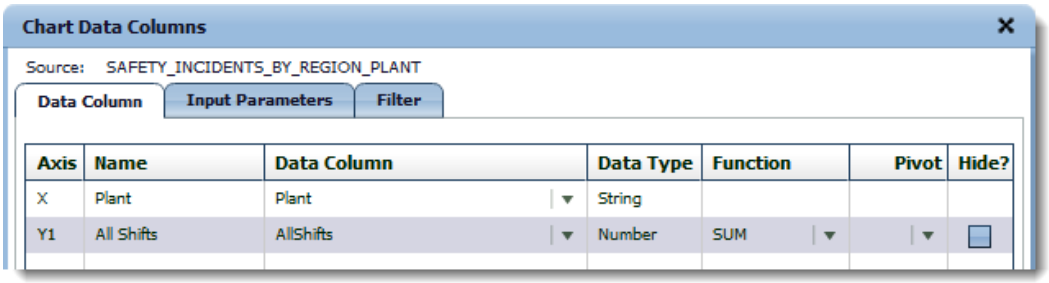


Figure 17-30 (source chart Data Columns)

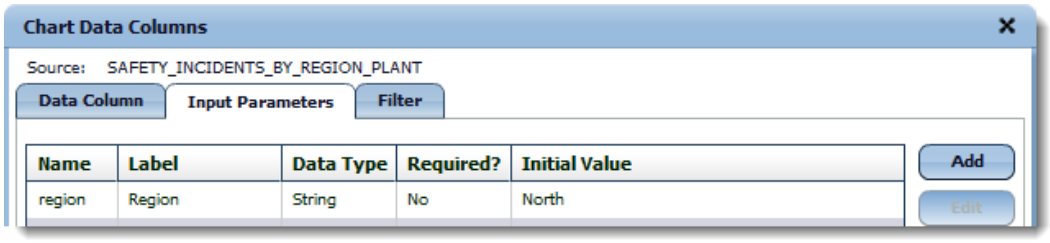


Figure 17-31 (source chart Input Parameters)

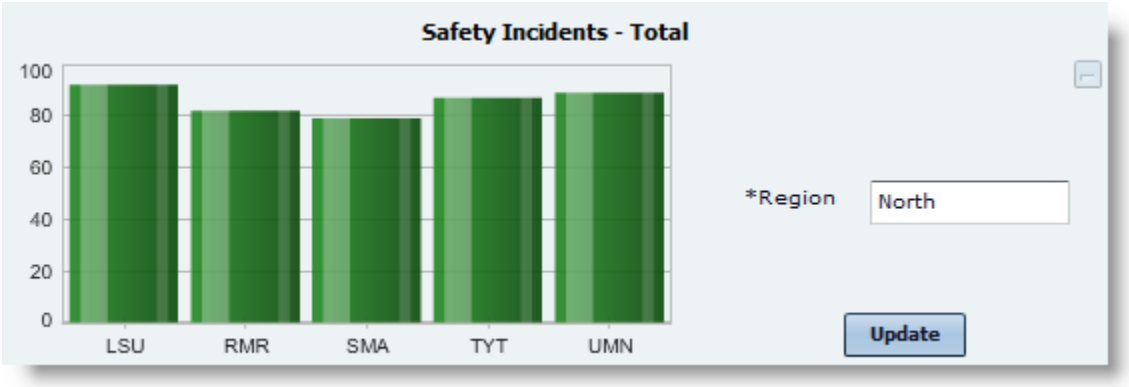


Figure 17-32 (source chart displayed)

Examples 1 & 2 - Target chart configured for **Priority to Source Parameters** or **Priority to Drilldown Filters:**

When the user clicks on the bar for "SMA" in the source chart, both the Input Parameter named "Region" and the Chart Filter named "Plant" are accepted by the target chart, as shown in Figure 17-33. There is no conflict between the two, so priority is not an issue in this example.

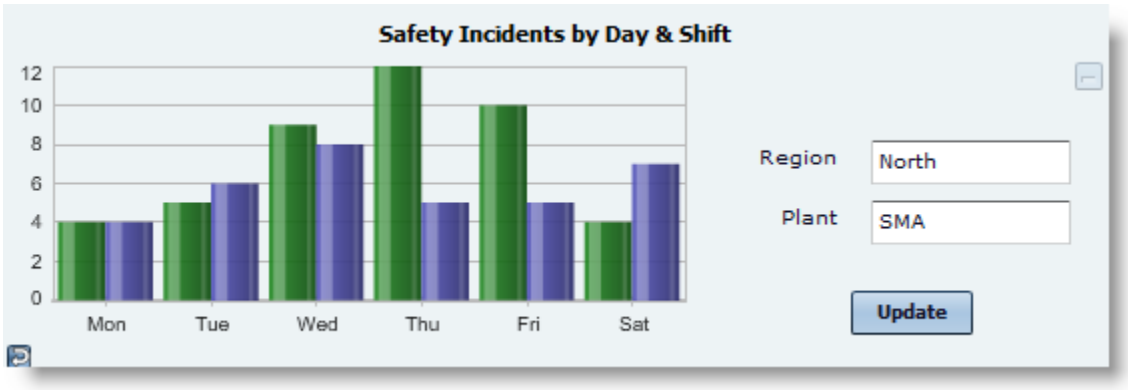


Figure 17-33

Example 3 - Target chart configured for **Only Source Parameters:**

When the user clicks on the bar for “SMA” in the source chart, only the Input Parameter called “Region” is accepted by the target chart. The Chart Filter named “Plant” is ignored. Therefore, the user is prompted to enter a value for “Plant”, as seen in Figure 17-34.

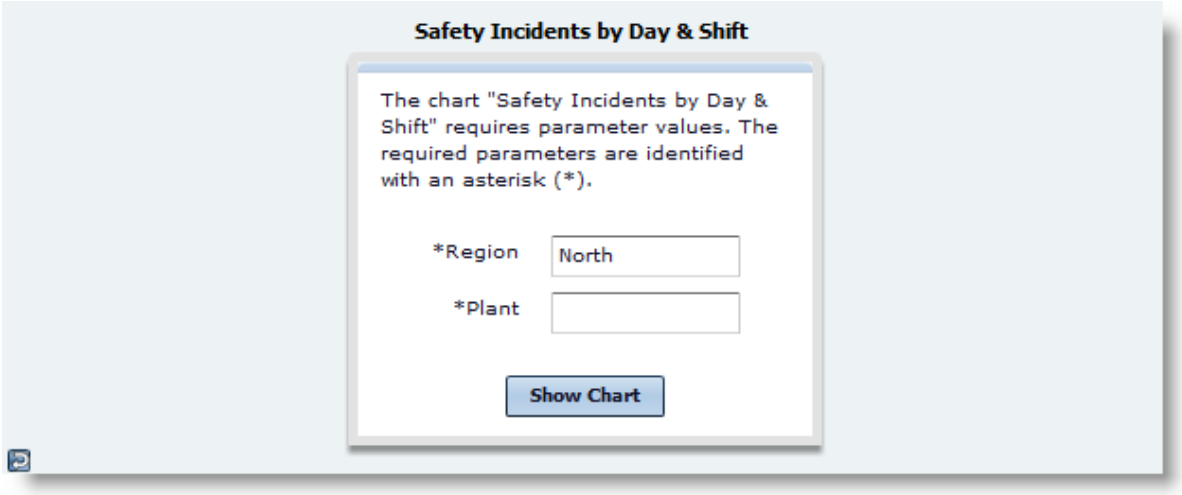

Safety Incidents by Day & Shift
The chart "Safety Incidents by Day & Shift" requires parameter values. The required parameters are identified with an asterisk (*).
*Region
North
*Plant
Show Chart

Figure 17-34

Example 4 - Target chart configured for **Only Drilldown Filters:**

When the user clicks on the bar for “SMA” in the source chart, only the Chart Filter called “Plant” is accepted by the target chart. The Input Parameter called “Region” is ignored. Therefore, the user is prompted to enter a value for “Region”, as seen in Figure 17-35.

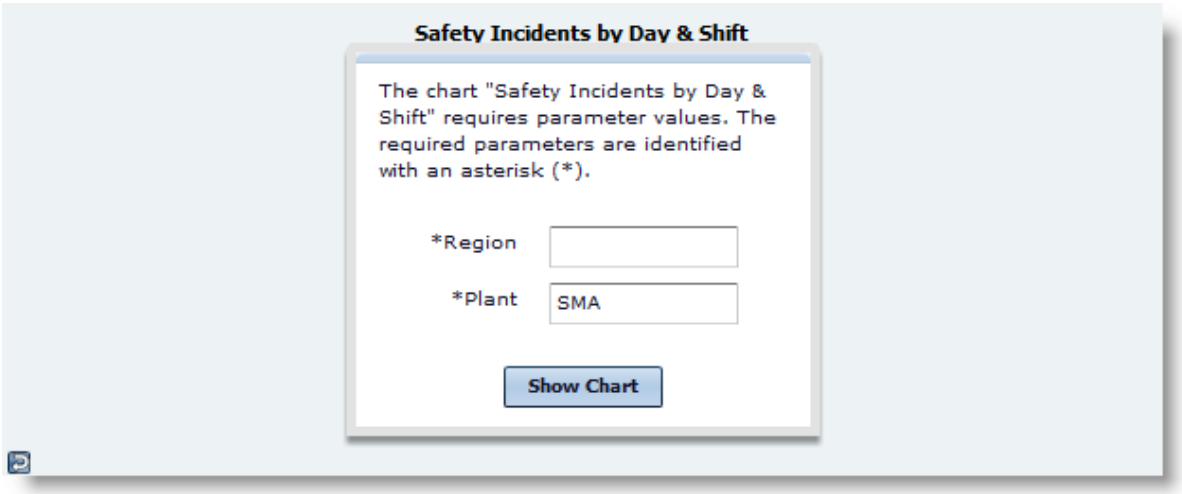

Safety Incidents by Day & Shift
The chart "Safety Incidents by Day & Shift" requires parameter values. The required parameters are identified with an asterisk (*).
*Region
*Plant
SMA
Show Chart

Figure 17-35

Example 5 - Target chart configured for **Neither Parameters or Drilldown Filters:**

When the user clicks on the bar for "SMA" in the source chart, both the Input Parameter called "Region" and the Chart Filter called "Plant" are ignored by the target chart. Therefore, the user is prompted to enter a value for "Region" and "Plant", as seen in Figure 17-36.

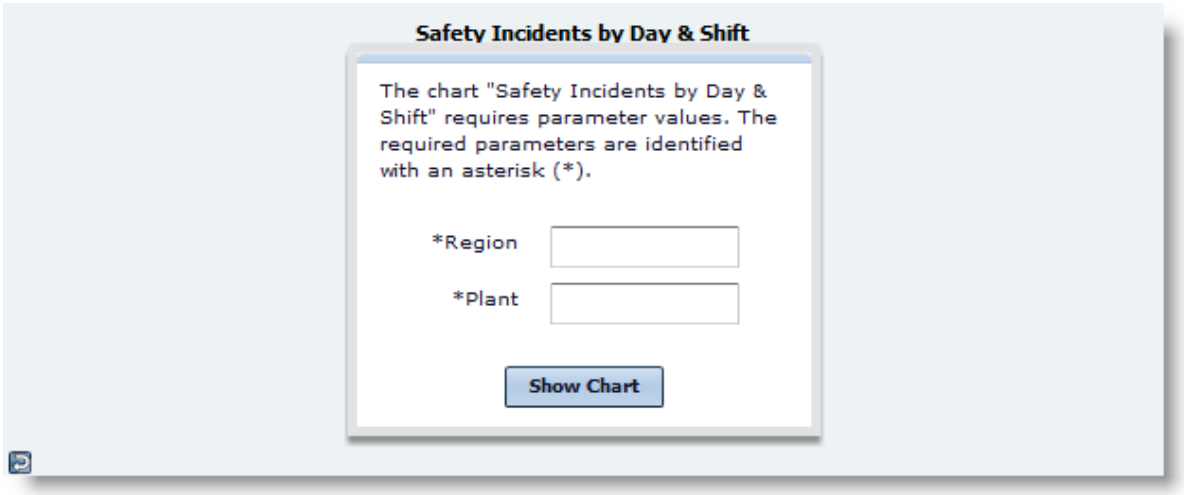

Safety Incidents by Day & Shift
The chart "Safety Incidents by Day & Shift" requires parameter values. The required parameters are identified with an asterisk (*).
*Region
*Plant
Show Chart

Figure 17-36

17.10 Prompting the User for Input Parameter Values

Input Parameter values are entered through Input Parameter "prompts." Prompts work the same for dashboards and charts, but the circumstances in which they are presented to the user differ.

17.10.1 Dashboard Input Prompts

When a dashboard is first opened, the user may or may not be presented with a pop-up prompt to enter Input Parameter values. The appearance of a prompt depends on the situation, as outlined in Section 17.11, "Rules for Prompting". If a prompt is necessary, it will look similar to Figure 17-37. Required parameters are identified with an asterisk (*).

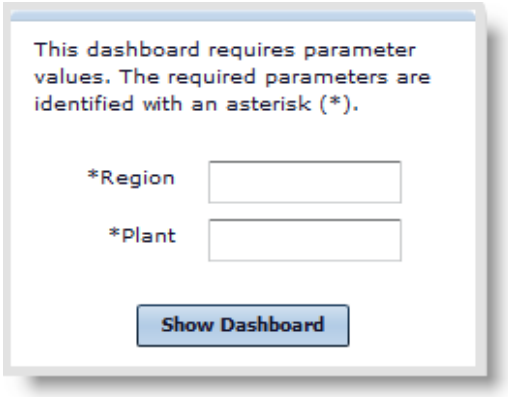

This dashboard requires parameter values. The required parameters are identified with an asterisk (*).
*Region
*Plant
Show Dashboard

Figure 17-37

The user may also open the prompt themselves. This is done by right-clicking on the dashboard frame and selecting “Enter Dashboard Parameters…” The prompt will look similar to Figure 17-38.

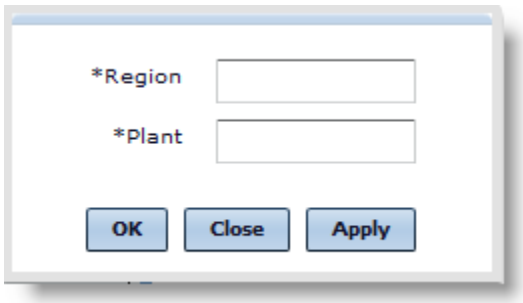


Figure 17-38

Finally, the Dashboard Input Parameter prompt may be permanently added to a dashboard so that it is visible at all times. This is done by adding a “Dashboards Parameter” Panel to one of the frames of the dashboard. Panels are explained in Chapter 15, “Dashboard Panels”.

17.10.2 Chart Input Prompts

When a chart is first opened, the user may or may not be presented with a pop-up prompt to enter Input Parameter values. The appearance of a prompt depends on the situation, as outlined in Section 17.11, “Rules for Prompting”. If a prompt is necessary, it will look similar to Figure 17-39. Required parameters are identified with an asterisk (*).

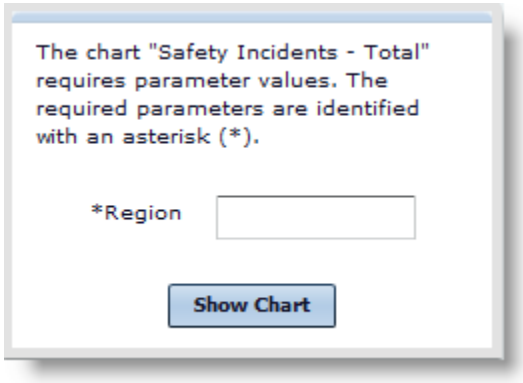

The chart "Safety Incidents - Total" requires parameter values. The required parameters are identified with an asterisk (*).
*Region
Show Chart

Figure 17-39

By default, Chart Input Parameter prompts are visible as part of the chart, as shown in Figure 17-33. You can control how prompts are displayed via the Parameters settings in the chart’s properties. To access these settings, right-click on the chart and select ‘Chart Properties’. On the ‘Features’ tab, scroll down under ‘Basic Settings’ until you see the settings shown in Figure 17-40.

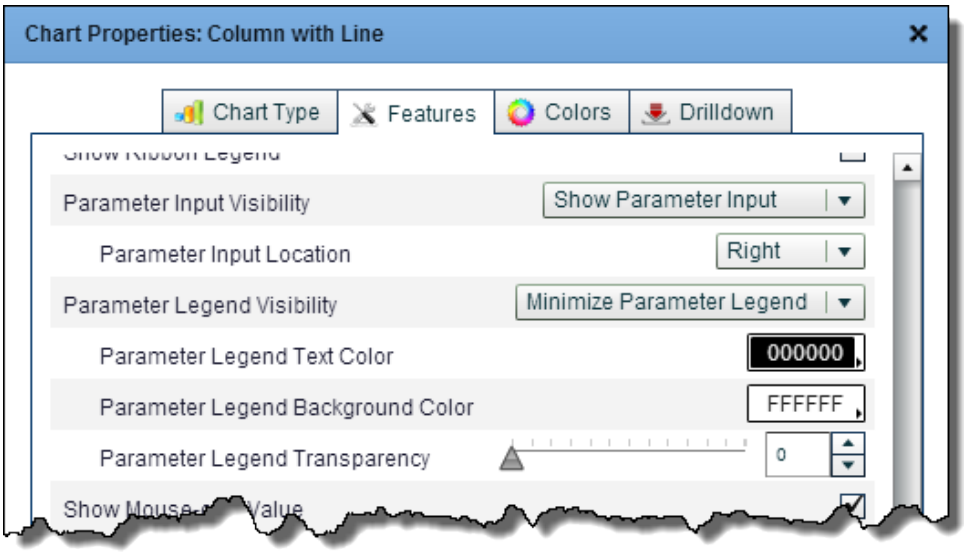


Figure 17-40

You can control whether the Input Parameter prompt is shown, hidden or minimized. You can also control the location of the prompt; left, right, top, bottom or floating. If you select floating, the prompt will act as a floating window that you can move around the dashboard.

The Parameter Legend displays the Input Parameter values the chart is currently using. You can control the visibility of the legend as well as its text color, background color and transparency.

17.11 Rules for Prompting

A user will be prompted to enter Input Parameter values when a dashboard and its charts are first loaded and one or more of the following conditions exist. This holds true for Dashboard Input Parameters and Chart Input Parameters.

1. An Input Parameter is marked as required, does not have an initial value and does not receive a value via a Drilldown Filter or Source Parameter.

2. The option "Always prompt for parameters on chart load" has been checked on the Input Parameter configuration screen (See Figure 17-1 (Chart built on Data Source Columns), Figure 17-2 (Chart built on Custom Queries) and Figure 17-3 (Dashboard).

17.12 Blank Parameter Values

A blank parameter value refers to a parameter value that has been provided, but is "blank". For example, a user is prompted for an Input Parameter value, but they leave the value blank and submit anyway. Therefore, a blank value is submitted and recognized by iDashboards. iDashboards will then replace that blank value with the value in the Input Parameters 'Replace blank with' field. If the 'Replace blank with' field is also blank (which it could be because it's optional), then the Input Parameter value will ultimately remain an empty string or null numeric or date value, depending on the parameter data type.

When a blank Input Parameter value is replaced with the ‘Replace blank with’ value, it is actually the PARAM macro that takes on the value of the ‘Replace blank with’ field. There are two situations where this can take place. (1) When the PARAM macro is used in a filter for a chart built using Data Source Columns, and (2) when the PARAM macro is used for a chart built using a Custom Query. PARAM macros will not be replaced with the ‘Replace blank with’ value when used in a chart title or stored procedure input.

When the PARAM macro is replaced with the ‘Replace blank with’ value, it is done so verbatim. Therefore, if the ‘Replace blank with’ value is a string, you need to make sure you include single quotes in the Input Parameters ‘Replace blank with’ field so that the SQL query used by the chart runs properly. Since a chart’s filter value is really part of the SQL WHERE clause, the string-based filter value needs to be singled quoted. If the ‘Replace blank with’ value is a number or datetime, no quotes are needed. When the PARAM macro is used in situations other than expanding to the ‘Replace blank with’ value, iDashboards takes care of adding the single quotes (if needed).

18. Picklist

A picklist is a defined list that can be used to populate dropdown parameters. Picklists are managed independently from parameter creation; therefore the same picklist may be used multiple times across several charts and dashboards. The values in the list can be either static or dynamic.

18.1 Permissions

A user's role must be either an Analyst or Administrator to create a picklist. Picklists cannot be saved into the 'Personal' category. If an analyst or administrator does not have save access to a category then a warning will appear (see Figure 18-1).

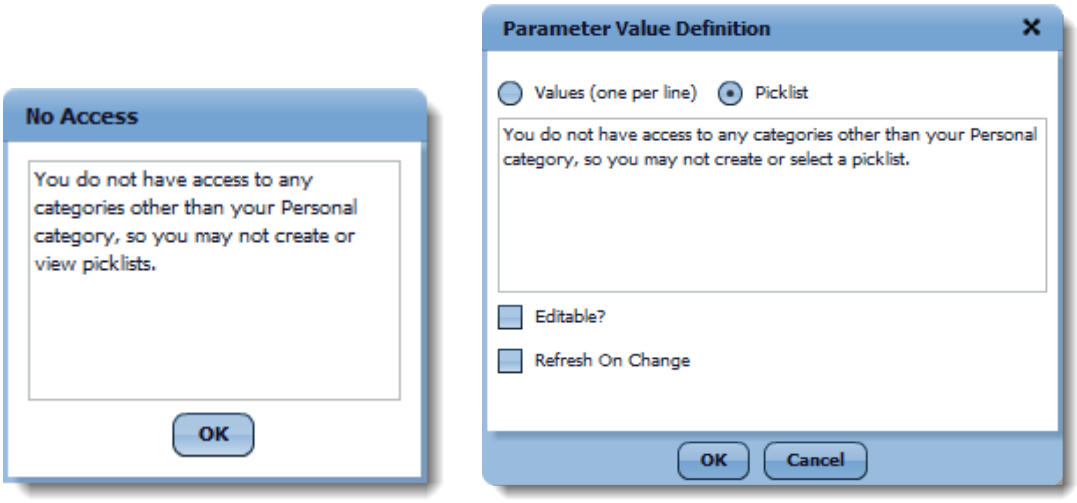

No Access
You do not have access to any categories other than your Personal category, so you may not create or view picklists.
OK
Parameter Value Definition
Values (one per line)
Picklist
You do not have access to any categories other than your Personal category, so you may not create or select a picklist.
Editable?
Refresh On Change
OK
Cancel

Figure 18-1

18.2 Create a Picklist

One way to create a picklist is to use the 'Application Menu' button to access the 'Picklist Editor…' option (see Figure 18-2).

Figure 18-2

***Note**: The second method for creating a picklist occurs during the creation of an input parameter.*

The resulting window in Figure 18-3 is used for creating new picklists, editing existing picklists, copying or deleting picklists.

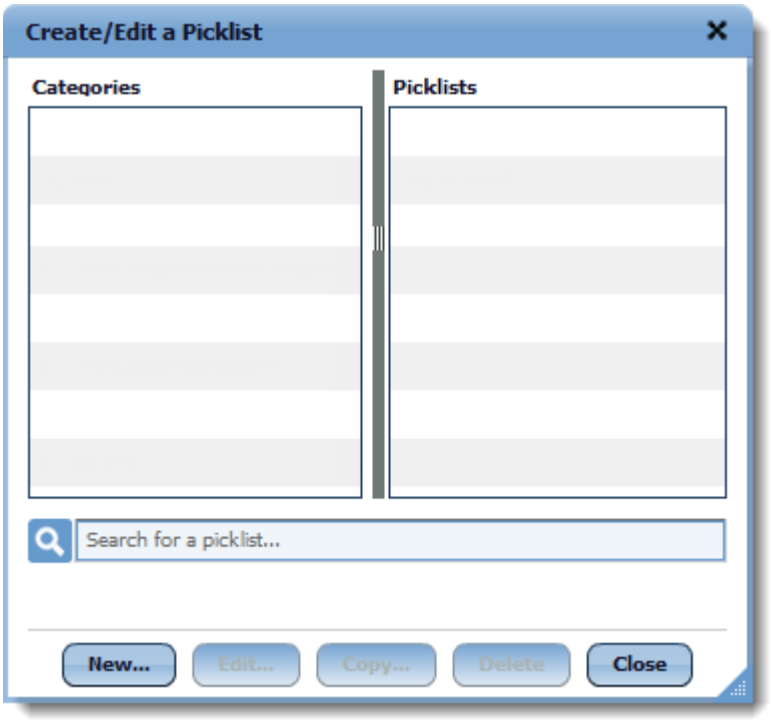


Figure 18-3

18.2.1 Creating a new picklist

The creation of a picklist is very similar to the creation of chart. As with chart data, picklist data can be obtained from a dynamic data source or may be statically defined. Dynamic picklist data can be obtained from a database table or view, a stored procedure, a data feed, a custom query or from a named range using Excel. Static picklist data can be manually defined or imported from an Excel workbook or a CSV file.

The primary difference between picklist data and chart data is that a picklist has exactly two axis definitions associated with it; one for the actual value of a picklist item and one for the display value. Another difference from defining chart data is that expressions are not available to define picklist column values.

A new picklist is created using the ‘New’ button in the Picklist Editor, followed by selecting the type of picklist: static or dynamic (see Figure 18-4).

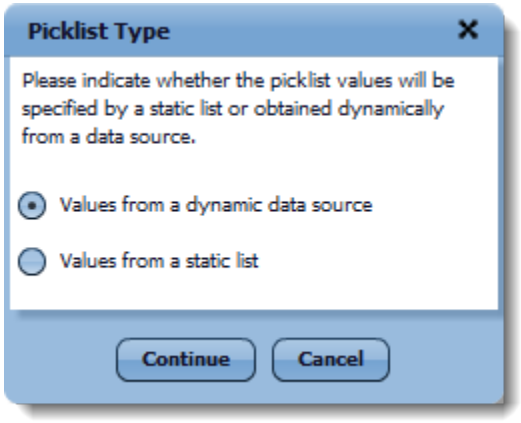

Picklist Type
Please indicate whether the picklist values will be specified by a static list or obtained dynamically from a data source.
Values from a dynamic data source
Values from a static list
Continue
Cancel

Figure 18-4

Next, select the data source and then the table, view, or stored procedure. Lastly, the picklist definition window will display (see Figure 18-5).

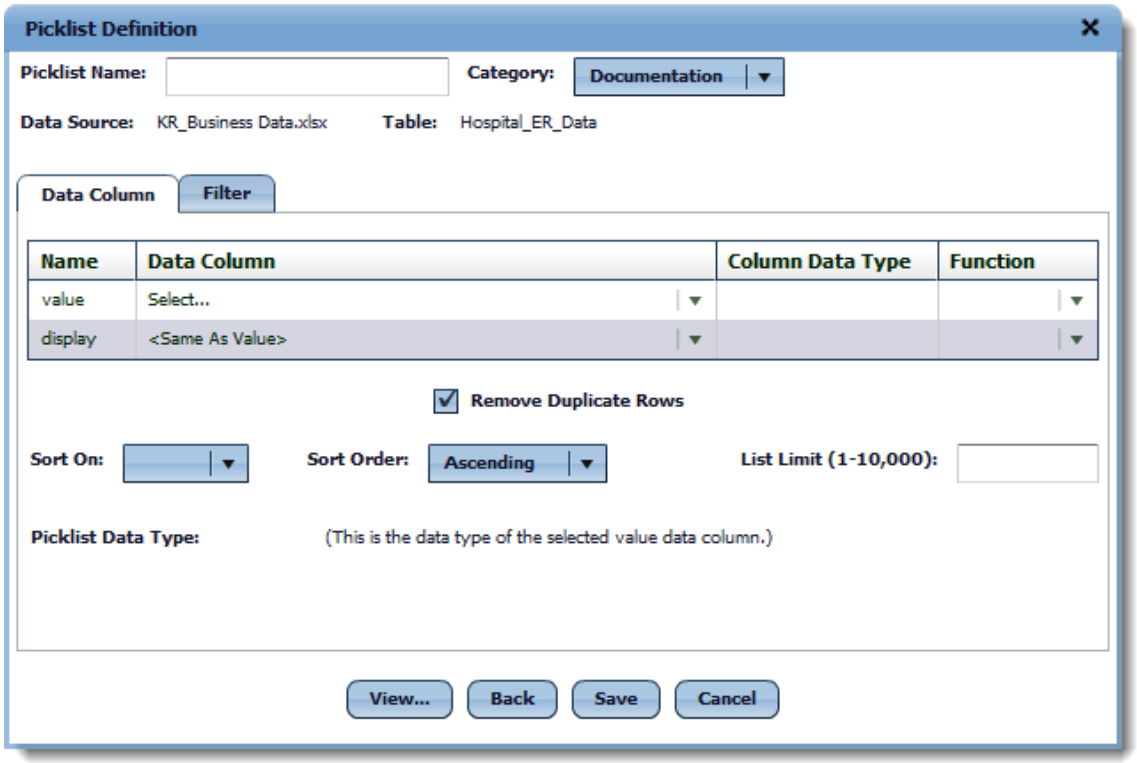


Figure 18-5

18.2.2 Name

The picklist must be given a name of less than 50 characters. The name will later be referenced when building input parameters at the chart or dashboard level.

18.2.3 Category

Like charts, a picklist must be saved into a category. Role-based permissions will determine if a user is able to save within the category. The category drop-down menu will also allow a picklist to be moved from one Category to another.

18.2.4 Data Column

Like charts, a picklist must connect to columns of data. The value name must be mapped to a data column. The display name can either duplicate the value or connect to a second column to represent the data shown in the picklist. Functions for each column can be used to aggregate the data if needed.

Note: *When a picklist is used with an input parameter, the user can identify the 'Initial Value'. The value entered must come from the 'Value' data column and not the 'Display' data column.*

18.2.5 Formatting the view of a Picklist

Picklists created from a column data type of Datetime, Number or String has an option to format their display. For example, the setting for removing duplicate rows is on by default. A row limit may also be used to restrict lists that are too long. In Figure 18-6 the highlighted properties are described below.

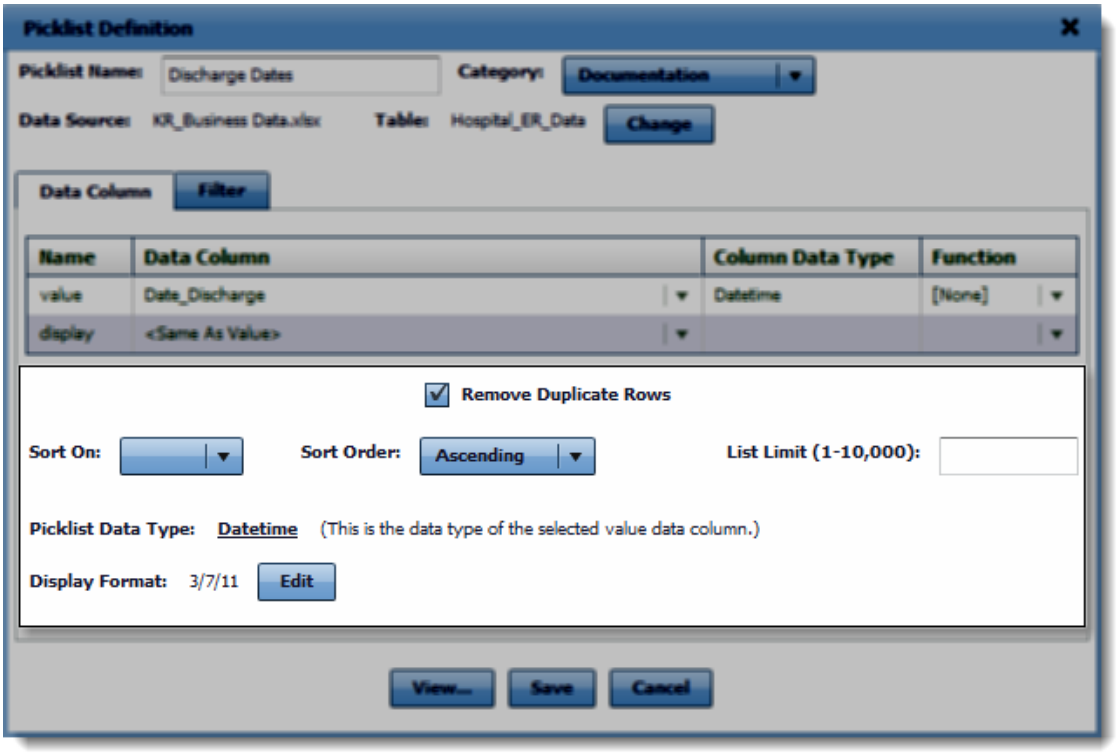


Figure 18-6

18.2.5.1 Sorting

Any picklists, regardless of the data type, have the ability to display values in a particular order. Options for sorting are: Ascending or Descending.

18.2.5.2 Date Formatting

Picklists created from a column data type of Datetime can be formatted to display certain date formats. Changes can be made when the Edit button is selected for the Display Format (see Figure 18-7).

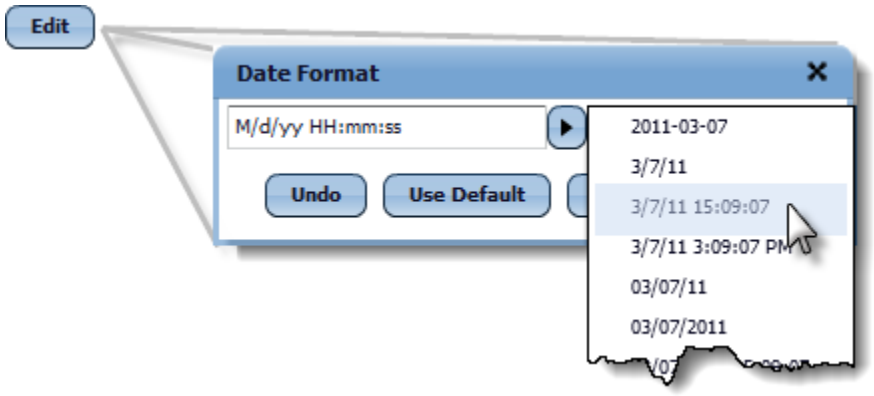


Figure 18-7

18.2.5.3 Number Formatting

Picklists created from a column data type of Number can be formatted to display certain numeric formats. Changes can be made when the Edit button is selected for the Display Format (see Figure 18-8).

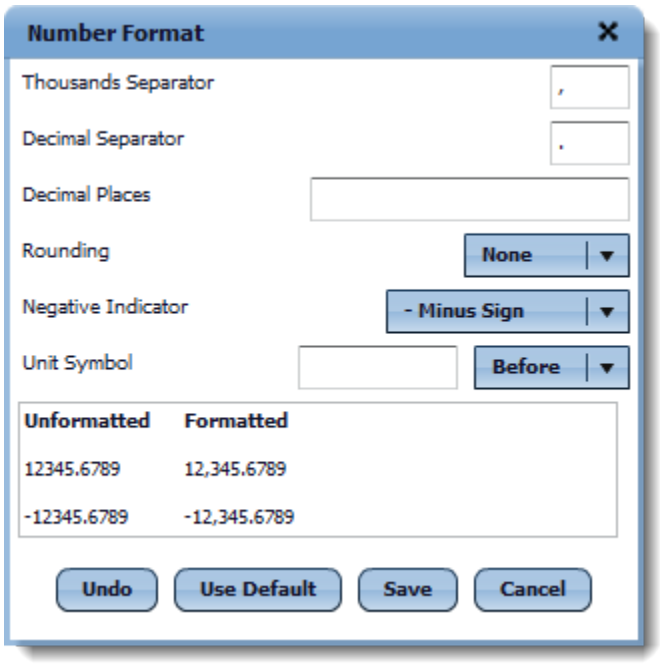


Figure 18-8

18.2.6 Preview List

During the picklist definition, clicking on 'View…' will open a preview window illustrating the Value and Display fields.

18.2.7 Save Picklist

Clicking on Save within the Picklist Definition window will ensure the picklist is available in the future while building input parameters.

18.3 Edit a Picklist

Once a picklist has been saved it can be edited. Edits allow for any type of change including renaming the picklist or moving the picklist to a different category. However, once a picklist is associated to a parameter the data type of the picklist may not be changed. To edit a picklist, use the Application Menu button to access the Picklist Editor (see Figure 18-9). Locate and select the picklist and then click on the 'Edit…' button.

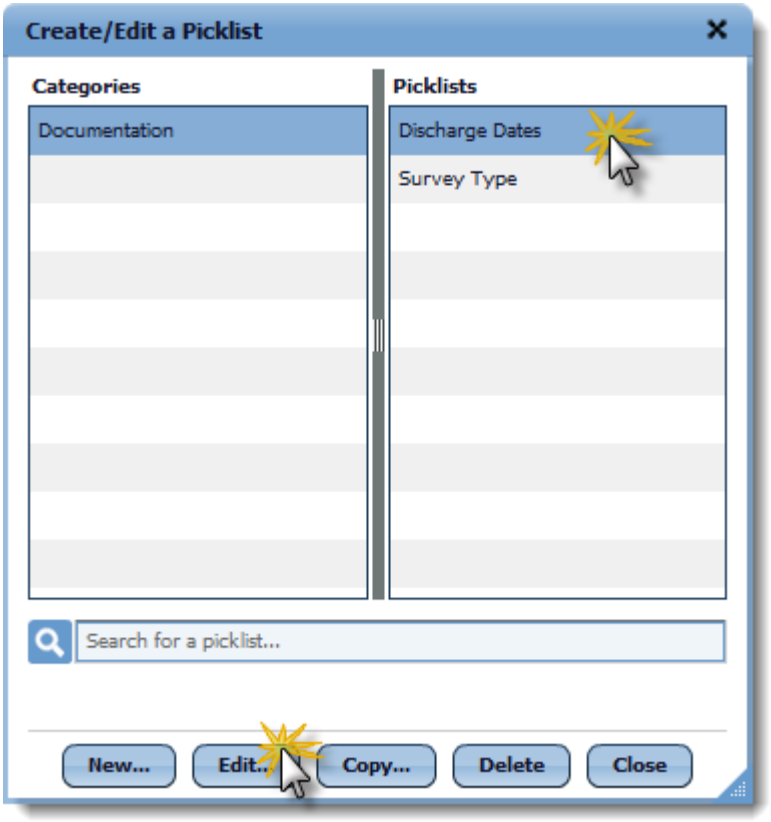


Figure 18-9

18.4 Copy a Picklist

Once a picklist has been saved it can be copied into a new picklist. All existing data connections, filters and formatted views will carry forward into the new picklist. To copy a picklist, use the Application Menu button to access the Picklist Editor. Locate and select the picklist and then click on the 'Copy…' button.

18.5 Delete a Picklist

Once a picklist has been saved it can be deleted. Users with 'Save' permissions to a given category may delete a picklist provided there are no parameters associated with it. Deletion of a picklist that is associated with parameters is not permitted.

18.6 Associating a Picklist with an Input Parameter

A picklist is associated with a parameter when the parameter is defined. The selected control type must be 'Dropdown List'. A picklist is specified for a dropdown parameter via the 'Define…' button on the Parameter Definition dialog. The resulting Parameter Value Definition dialog now provides the ability to select a picklist, as well as the option to create a new picklist (see Figure 18-10).

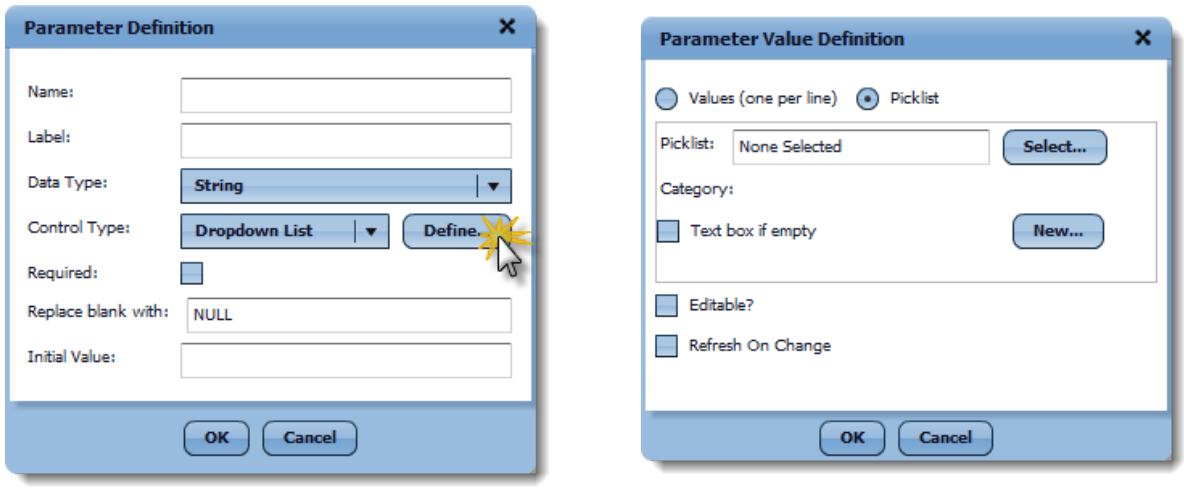


Figure 18-10

The picklist selection dialog displays existing picklists in categories to which the user has 'View' permissions. The data type of the picklist must be the same as the data type of the parameter in order for the picklist to be available for selection. If the parameter data type is string, then any picklist may be selected. If it is number then only picklists of the number type may be selected, as with datetime only picklists whose data type is datetime may be selected. If the picklist is of an incompatible type, it is not selectable and the tooltip indicates the incompatibility issue.

18.7 Empty Picklist

Because of the dynamic nature of picklist data, an empty picklist is a possibility. If a parameter associated with a picklist is required, not editable and does not have an initial value, the user will be notified and prompted to correct the parameter. The 'Text box if empty' checkbox is provided to convert the control to a text box in the event the picklist is empty.

> ***Important Note**: If a dashboard parameter contains a required parameter and is set to 'Always prompt for parameter on dashboard load' then a blank picklist will not allow any part of the dashboard to load. The user must wait for the picklist to contain data, reconfigure the picklist or close the dashboard.*

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19. Excel Import/Export

19.1 Import

Excel Data Import is used to retrieve data from an Excel spreadsheet to load into an iDashboards chart. For complete details on Excel Import, refer to Chapter 6, "Creating Charts: Static Data". This form of import is static, meaning that the data is saved to the iDashboards repository. This data does not act as a dynamic data source.

You may also use data from Excel as a dynamic data source, meaning that every time you upload an updated version of the spreadsheet, the new data will be reflected in the chart that is pointing to it. To set this up, an iDashboards Administrator must use the Excel Autodirectory functionality in the iDashboards Administrator Application. See the iDashboards Administrator's Manual for more information.

19.2 Export

iDashboards provides an easy method to export data into a comma separated value or Microsoft Excel file for use with other applications. To export chart data, right-click on the chart and choose 'Export Chart Data…' You can also choose 'Chart Data…' and then from the **Chart Data** window click the "Export Chart Data" button (see Figure 19-1).

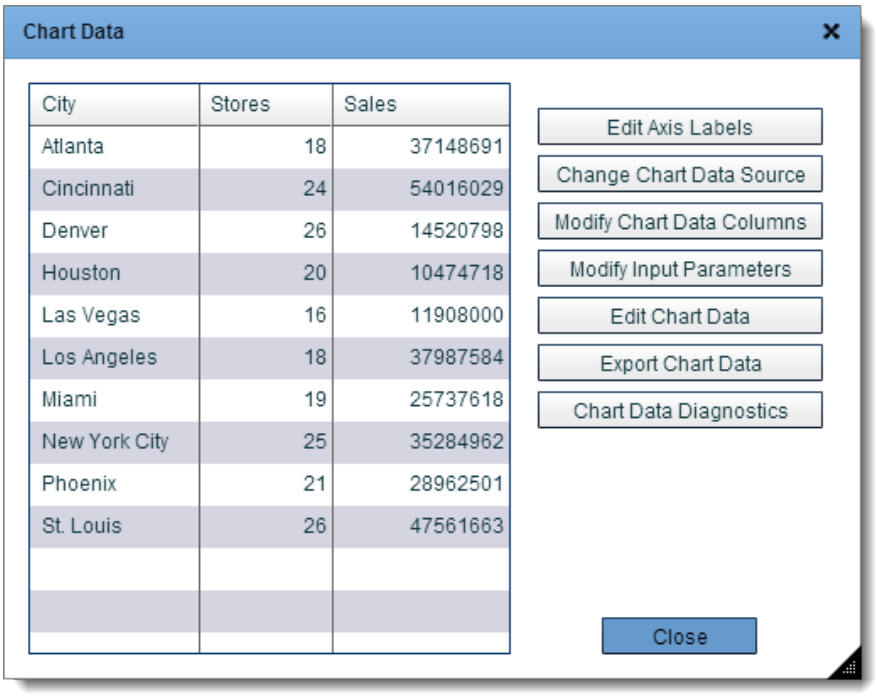

Figure 19-1

A **File Download** dialog box will pop up asking if you would like to “Open”, “Save” or “Cancel”. Opening (or saving then opening) the file will yield a comma separated value file that can be opened in Excel or your favorite text editor (see Figure 19-2 and Figure 19-3).

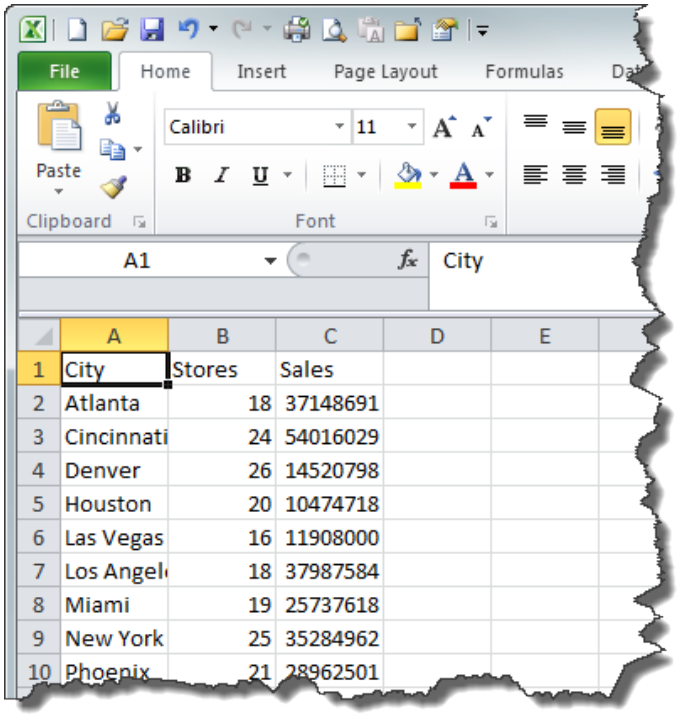

Figure 19-2

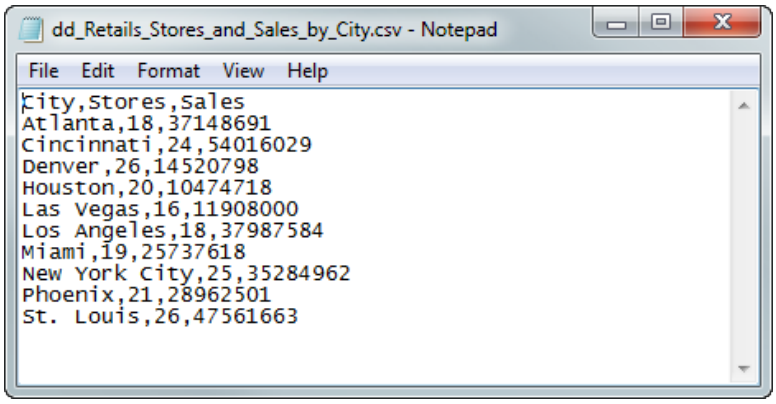

Figure 19-3

20. Deleting Charts and Dashboards

You may delete an existing chart or dashboard only from Categories to which you have Save permissions. There is no mechanism in iDashboards to recover deleted chart or dashboards.

20.1 Deleting Charts

To delete a chart, click 'Delete Charts …' from the Application Menu button on the bottom left of the dashboard screen. This pops-up a window titled **Delete Chart** that contains a list of all Categories to which you have Save permissions. When you select a Category, a list of all charts in that Category is displayed (see Figure 20-1). Simply highlight the chart you would like to delete and click the "Delete" button. The chart will be deleted without warning. A message box will confirm the deletion.

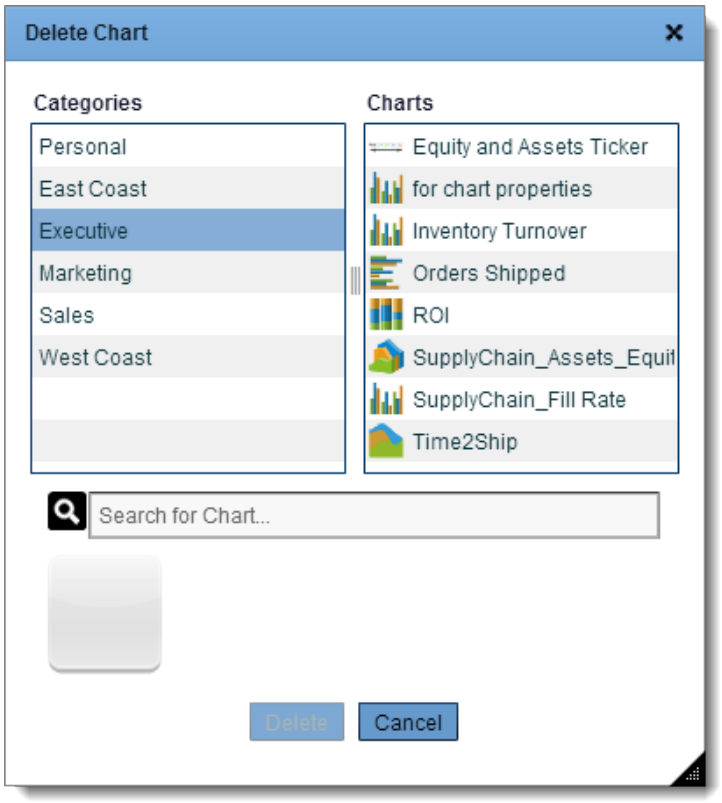

Figure 20-1

Note: *Charts can only be deleted one at a time.*

Note: *Alternatively, Charts can be deleted from the Administrative Application, by an Administrator.*

20.2 Deleting Dashboards

To delete a dashboard, click ‘Delete Dashboards …’ from the Application Menu button on the bottom left of the dashboard screen. This pops-up a window titled **Delete Dashboard** that contains a list of all Categories to which you have Save permissions. When you select a Category, a list of all dashboards in that Category is displayed (see Figure 20-2). Simply highlight the dashboard you would like to delete and click the “Delete” button. The dashboard will be deleted without warning. A message box will confirm the deletion.

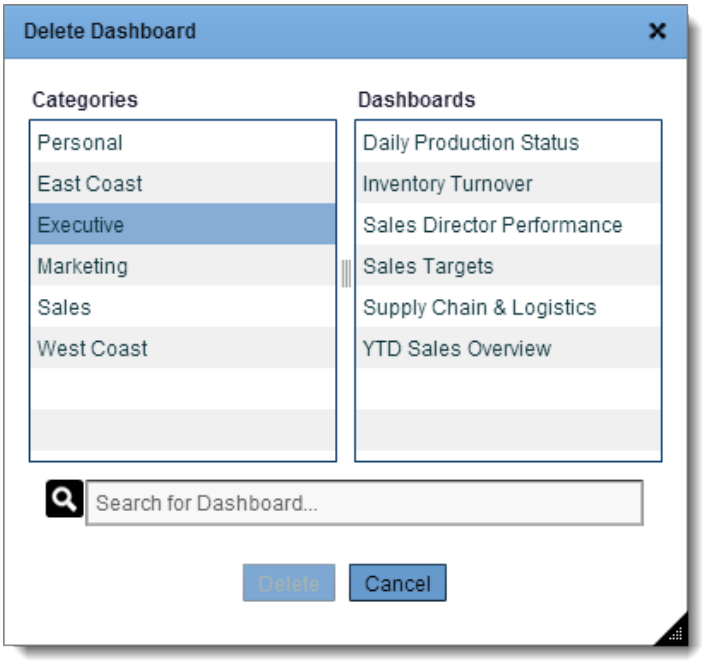

Figure 20-2

Note: *Dashboards can only be deleted one at a time.*

Note: *Alternatively, Dashboards can be deleted from the Administrative Application, by an Administrator.*

21. Diagnostics

Diagnostics provide information about how the data displayed within a given chart was obtained. The diagnostics reported vary based on the data source type, whether the chart has filters or parameters, and whether the chart is a drilldown target (see Figure 21-1).

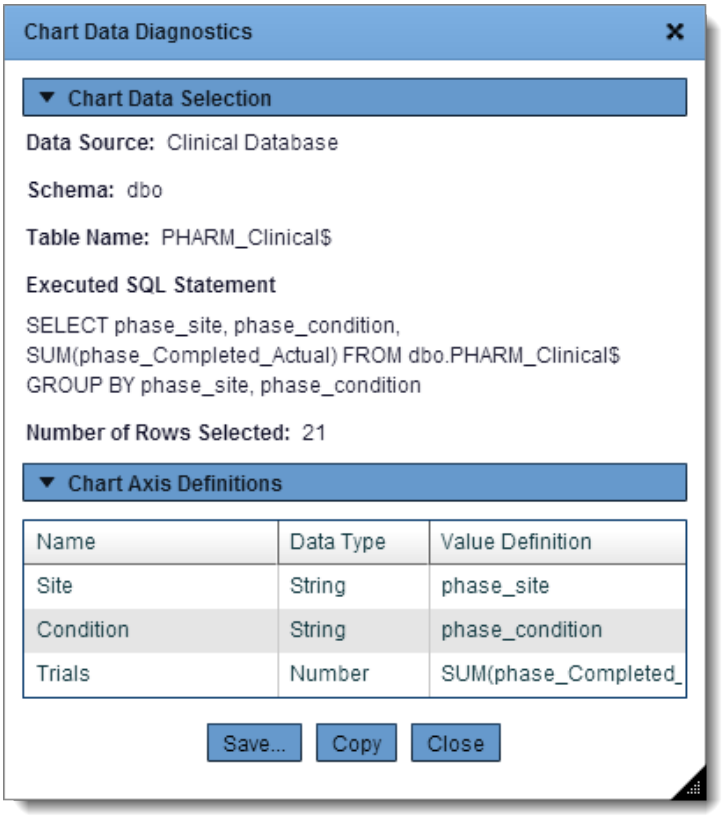

Figure 21-1

21.1 Accessing Chart Data Diagnostics

Chart data diagnostics are available three ways:

- Through the 'Chart Menu' button
- Through the right-click > 'More Options…'
- Through the 'Chart Data' dialog box

Diagnostics are always available to users with the following roles of: Admin, Analyst or Business User. By default, diagnostics are not available in the chart menu or chart context menu for viewers or guest users.

Note: *The "{Guest, Viewer} Role May View Diagnostics" settings are provided in the Admin application to indicate whether diagnostics should be made available to either type of role.*

21.2 Diagnostics Sections

The ‘Chart Data Selection’ section and the ‘Chart Axis Definitions’ section always appears in the diagnostics information. Other types of chart features will provide additional details in the diagnostics. Listed below in Table 21 are details on each section that may appear in the diagnostics.

Section Name	Display
Chart Data Selection	All Data Source Types
Chart Axis Definitions	All Data Source Types
Drilldown Filters	All Data Source Types, Drilldown Target Only
Chart Parameters	All Dynamic Data Source Types, Parameters Only
Chart Data Filters	All Dynamic Data Source Types except Custom Query, Filters Only
Chart Data Arguments	Stored Procedures and Feeds only, Arguments Only

Table 21

For example, if a user views the diagnostics on a drilldown target chart, then the Drilldown Filters section will display any values used as a filter (see Figure 21-2).

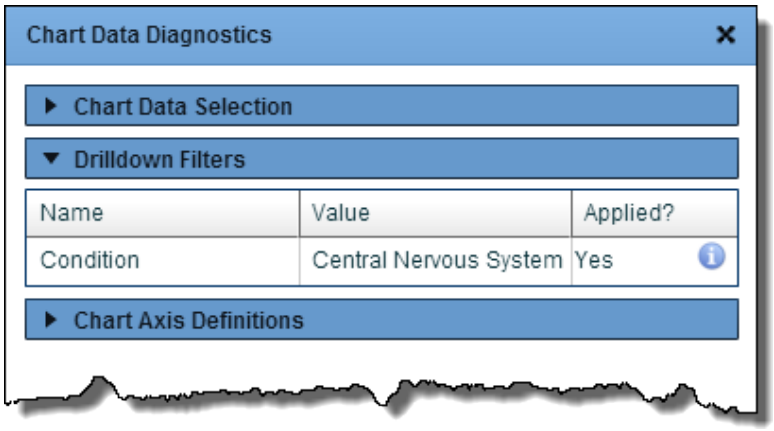

Figure 21-2

21.2.1 Chart Data Selection

This section always appears in the diagnostics for all data types. It contains general information about how the data is selected for the chart. At a minimum, items include: ‘Data Source’, ‘Executed Query’, and ‘Number of Rows Selected’ (see Figure 21-3). Additional items appear based on the construction of the chart (i.e. ‘Schema’, ‘Table Name’, ‘Named Range’, etc.)

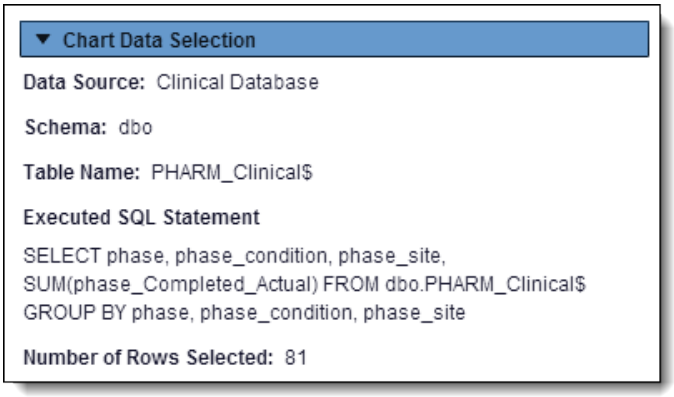

Figure 21-3

21.2.2 Chart Axis Definitions

This section always appears in the diagnostics for all data types. The axis name and data type are displayed as well as the value definition used to provide the data for the axis (see Figure 21-4). When the axis is from a direct column mapping, the name of the column is given. When it is an aggregate function, the applied aggregate function is displayed. When it is an expression, the defined expression is shown and the expanded expression with parameter substitution is show in the tooltip

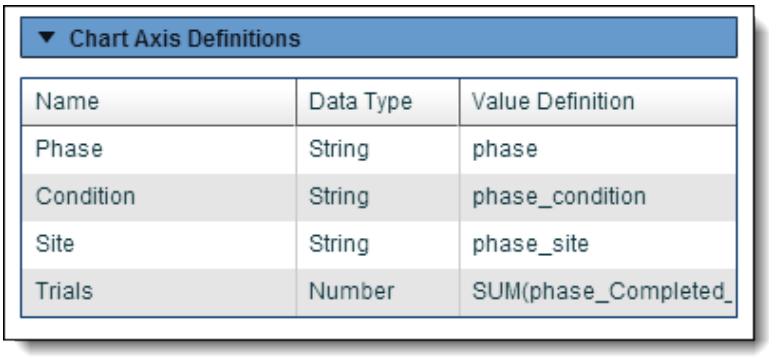

Figure 21-4

21.2.3 Drilldown Filters

This section is present when the chart is a drilldown target. It lists the drilldown filters indicating the name of the filter, the value of the filter and whether or not it was applied (i.e. whether it matches an axis of the current chart). More information regarding the drilldown filter value is available via the information icon . The additional information displays the drilldown chain and where in the chain the filter value came from (see Figure 21-5).

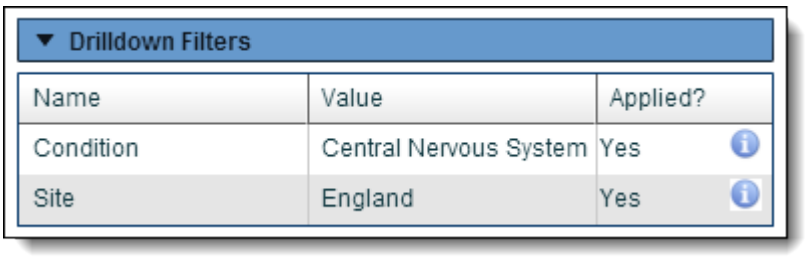

Figure 21-5

21.2.4 Chart Parameters

This section is present when the chart has parameters defined. The parameters are listed indicating the name of the parameter, the parameter label, the data type of the parameter and the value of the parameter (see Figure 21-6).

Note: *Parameters are not available on static charts.*

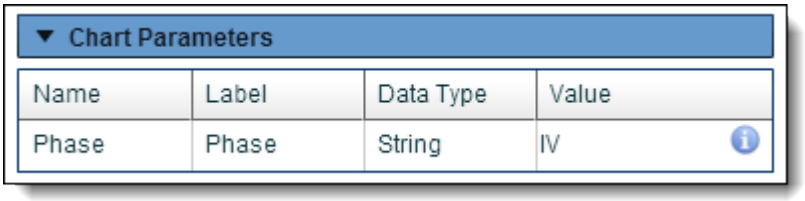

Figure 21-6

More information regarding the parameter value is available via the information icon. A message indicating the source of the parameter value is indicated. Possible parameter value sources are:

- Source chart parameter (Drilldown target only)
- Source chart drilldown filter (Drilldown target only)
- Source dashboard drilldown parameter (Drilldown target only)
- Dashboard parameter
- Dashboard parameter default
- User supplied
- Parameter default

If the chart is a drilldown target, the additional information displays the drilldown chain and where in the chain the parameter value came from.

21.2.5 Chart Data Filters

This section is present when the chart has data filters defined and displays the defined filter criteria, the applied filter criteria with parameter values substituted and macros expanded (see Figure 21-7).

Note: *Filters are not available for static data sources or custom queries.*

Chart Data Filters
Defined Data Filter
phase_site not in 'Germany', 'England', 'China', 'Brazil' AND
phase_Completed_Actual > 150
Applied Data Filter
phase_site not in ('Germany', 'England', 'China', 'Brazil') AND
phase_Completed_Actual > 150

Figure 21-7

21.2.6 Chart Data Arguments

This section is present when the chart data source has arguments associated with it. Only data feeds and stored procedures have arguments associated with them. The arguments are listed indicating the name of the argument, the defined value of the argument and the applied value of the argument with parameter values substituted and macros expanded.

21.2.7 Additional information

Some sections within the diagnostics will contain a graphical representation indicating the chain of events that took place when a value moved from one chart to another. The availability of this graphic is represented with circular icon (see Figure 21-8). When the information icon is selected a new window will appear illustrating the chain details (see Figure 21-9).

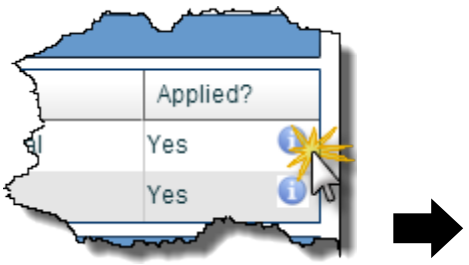

Figure 21-8

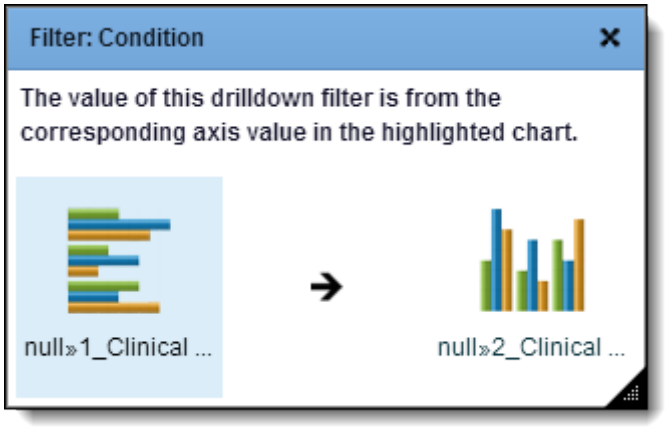
Filter: Condition
The value of this drilldown filter is from the corresponding axis value in the highlighted chart.
null»1_Clinical ...
null»2_Clinical ...

Figure 21-9

21.3 Export Diagnostic Details

Diagnostics can be exported as XML either by copying the diagnostics XML to the clipboard via the ‘Copy’ button or by saving the diagnostics as a text file via the ‘Save’ button (see Figure 21-10). This information can be used during technical support.

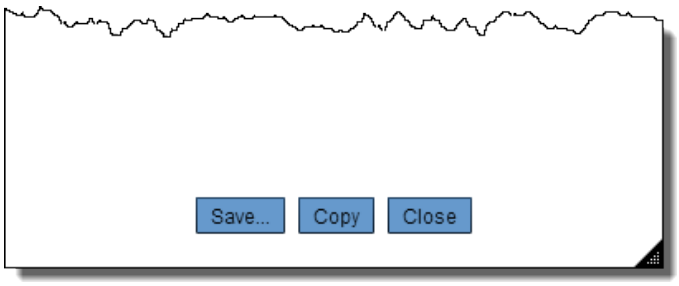

Figure 21-10

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